

# SERVICE MANUAL

# AA-2D CHASSIS

<u>MODEL</u>	<u>DEST.</u>	<u>COMMANDER</u>	<u>CHASSIS NO.</u>
<b>KV-32S65</b>	US	RM-Y167	SCC-S07K-A
<b>KV-32S65</b>	CND	RM-Y167	SCC-S08M-A
<b>KV-35S65</b>	US	RM-Y167	SCC-S07M-A
<b>KV-35S65</b>	CND	RM-Y167	SCC-S08N-A



KV-32S65



RM-Y167



TRINITRON® COLOR TV  
**SONY®**

## SPECIFICATIONS

	KV-32S65	KV-35S65
Power requirements	120V,60Hz	120V,60Hz
Number of inputs/outputs		
Video <sup>1)</sup>	2	2
S Video <sup>2)</sup>	1	1
Audio <sup>3)</sup>	2	2
Audio Out <sup>4)</sup>	1	1
Monitor Out	-	-
TV out	-	-
S-Link	Yes	Yes
Speaker output(W)	5W x 2	5W x 2
Power Consumption(W)		
In use(Max)	180W	210W
In standby	2W	3W
Dimensions(W/H/D)		
(mm)	791 x 707 x 604.5mm	870 x 761 x 653mm
(in)	31 x 27 <sup>13/16</sup> x 23 <sup>3/4</sup>	34 <sup>1/4</sup> x 30 x 25 <sup>5/8</sup>
Mass		
(kg)	73kg	83kg
(lbs)	160.5 lbs	183lbs

### Television system

American TV standard

### Channel coverage

VHF:2-13/UHF:14-69/CATV:1-125

### Visible screen size

32-inch picture measured (KV-32S65)

35-inch picture measured (KV-35S65)

### Antenna

75 ohm external terminal for VHF/UHF

### Supplied Accessories

Remote commander (w/2 size AA (R6) batteries)

RM-Y167

### Optional Accessory

Connecting Cables: VMC-810S/820S

VMC-720M,YC-15V/30V,RK-74A

TV-Stand: SU-32A3,SU-35A3

VHF/UHF Mixer: EAC-66

<sup>1)</sup> 1 Vp-p 75 ohms unbalanced, sync negative

<sup>2)</sup> Y: 1 Vp-p 75 ohms unbalanced, sync negative

C: 0.286 Vp-p (Burst signal), 75 ohms

<sup>3)</sup> 500 mVrms (100% modulation), Impedance: 47 kilohms

<sup>4)</sup> More than 408 mVrms at the maximum volume setting (variable)

More than 408 mVrms at the maximum volume setting (fix)

Impedance: 50 kilohms

### (●)® SRS (SOUND RETRIEVAL SYSTEM)

The (●) SRS (SOUND RETRIEVAL SYSTEM) is manufactured by Sony Corporation under license from SRS Labs, Inc. It is covered by U.S. Patent No. 4,748,669. Other U.S. and foreign patents pending.

The word 'SRS' and the SRS symbol (●) are registered trademarks of SRS Labs, Inc.

BBE and BBE symbol are trademarks of BBE Sound, Inc. and are licensed by BBE Sound, Inc. under USP 4638258 and USP 4482866.

***Design and specifications are subject to change without notice.***

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## WARNINGS AND CAUTIONS


### **CAUTION!**

AFTER REMOVING THE ANODE, SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT.

### **WARNING!!**

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

### **SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.


### **ATTENTION**

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

### **ATTENTION!!**

AFIN D'EVITER TOUT RESQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

### **ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!**

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE  SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT SUSPECTE.

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampere). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63Trd are examples of passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

### HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

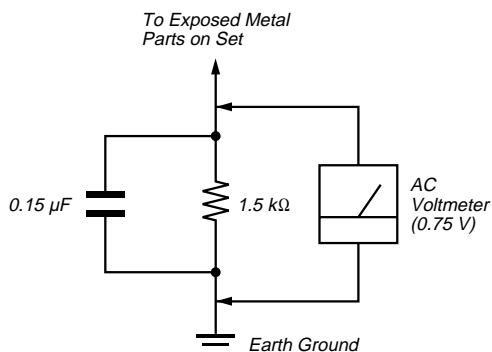


Fig. A. Using an AC voltmeter to check AC leakage.

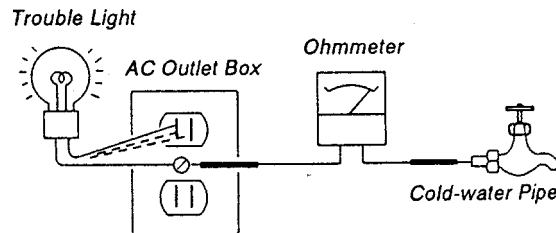


Fig B. Checking for earth ground.

# SECTION 1 GENERAL

The instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers shown reflect those of the Operating Instruction Manual.

## Welcome!

Thank you for purchasing the Sony Trinitron® Color TV. This manual is written for the models listed below. Before reading, check the model number located on the front of this manual or on the rear of your TV.

Model KV-35S45 is used for menu and illustration purposes. Differences in operation are indicated in the text; for example, "KV-35S45 only".

Model Number	Single line VCR required to be PIP	Auto focus	Chase to line PIP	APS	SOUNDING	Picture channel with memory	AUX/OUTLINE control
KV-32S40	•				•		
KV-32S45		•			•	•	
KV-32S65			•		•	•	
KV-32V40			•	•		•	•
KV-32V65							
KV-35S40					•		
KV-35S45	•				•		
KV-35S65		•			•	•	
KV-35V65		•	•			•	•

## Precautions

### Safety

- Operate the TV only with 120 V AC.
- The plug is designed, for safety purposes, to fit in the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- If any liquid or solid object should fall inside the cabinet, unplug the TV immediately and have it checked by qualified personnel before operating it further.
- If you will not be using the TV for several days, disconnect power by pulling the plug itself. Never pull on the cord.

For details concerning safety precautions, see the supplied leaflet "IMPORTANT SAFEGUARDS".

### Installing

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.

## Using This Manual

This manual is divided into four major sections. We recommend that you carefully review the contents of each section in the order presented to ensure that you fully understand the operation of your new TV.

### 1 Connecting and Installing the TV

This section guides you through your initial set up. It shows how to connect to your antenna or cable, and connect any accessories or components.

### 2 Basic Set Up

This section teaches you the basic skills needed to operate your new TV. It shows you how to operate special functions of the remote control.

### 3 Using your New TV

This section shows you how to begin using your new TV. It shows how to use the Easy Set Up Guide feature, and how to use your remote control.

### 4 Using your Menus

This section teaches you how to access on-screen menus and adjust your TV's settings.

Instructions in this manual are written for the remote control. Similar controls may be found on the TV console.

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## Connecting and Installing the TV

### Making Connections

Refer to the table below, it will direct you to the diagram suitable to the components you will be connecting.

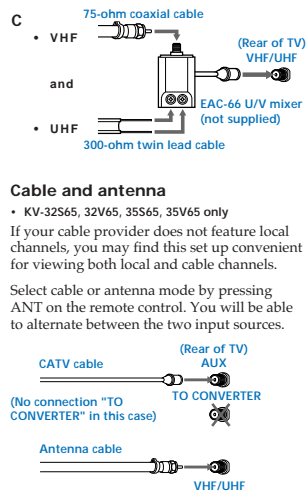
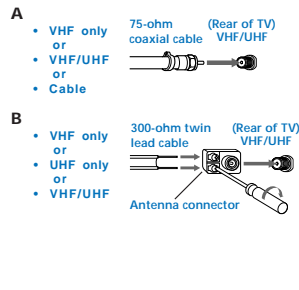
If you will be connecting	See page
Cable or antenna only	5
Cable and antenna (KV-32S65, 32V65, 35S65, 35V65 only)	5
Cable box	6
Cable box and cable to view scrambled channels (KV-32S65, 32V65, 35S65, 35V65 only)	6
VCR and cable or antenna	7
VCR and cable box	7
Direct Broadcast Satellite Receiver (DBS)	8
VCR and Direct Broadcast Satellite Receiver (DBS)	8
Digital Versatile Disc player (DVD)	9
Audio system	9
A/V receiver	10
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S-Link connections (KV-32S65, 32V65, 35S65, 35V65 only)	12

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## Cable or Antenna Connections

### Connecting directly to cable or an antenna

The connection you choose will depend on the cable found in your home. Newer homes will be equipped with standard coaxial cable (see A); older homes will probably have 300-ohm twin lead cable (see B); still other homes may contain both (see C).



### Note

- In order to receive channels with an antenna, you will need to turn your CABLE to OFF (see page 26) and perform the AUTO PROGRAM function.

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## Connecting and Installing the TV (continued)

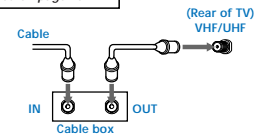
### Cable Box Connections

Some pay cable TV systems use scrambled or encoded signals that require a cable box to view all channels.

#### Cable box

- Connect the coaxial connector from your cable to the IN on your cable box.
- Using a coaxial cable, connect OUT on your cable box to VHF/UHF on your TV.

If you will be controlling all channel selection through your cable box, you should consider using the CHANNEL FIX feature discussed on page 26.



#### Cable box and cable

- KV-32S65, 32V65, 35S65, 35V65 only

For this set up, you can switch between scrambled channels (through your cable box), and normal (CATV) channels by pressing ANT on your remote control.

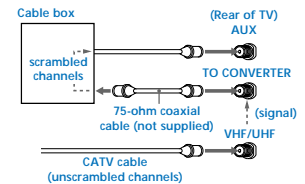
#### Notes

- Your Sony remote control can be programmed to operate your cable box. (see page 32)
- When using PIP, you cannot view the AUX input in the window picture.

Tip

Pressing ANT switches between these inputs.

If you are connecting a cable box through the AUX input and would like to switch between the AUX and normal (CATV) input you should consider using the CHANNEL FIX feature discussed on page 26.



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## VCR Connections

### Connecting an antenna/cable TV system with a VCR

- 1 Attach the coaxial connector from your cable or antenna to IN on your VCR.
- 2 Using A/V connectors, connect AUDIO and VIDEO OUT on your VCR to AUDIO and VIDEO IN on your TV.\*
- 3 Using a coaxial connector, connect OUT on your VCR to VHF/UHF on your TV.

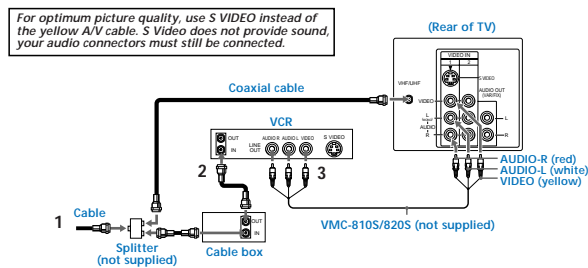
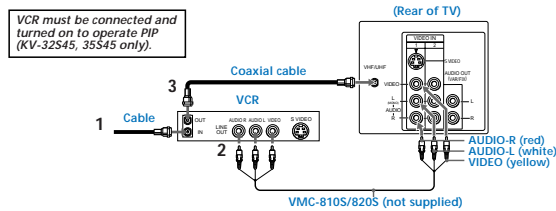
\* If you are connecting a monaural VCR, connect only the single white audio output to the left input on your TV.

### Connecting a VCR and TV with a cable box

You will need a splitter (not supplied) for the following connection.

- 1 Connect the single (input) jack of the splitter to your incoming cable connection. Connect the other two (output) jacks (using coaxial cable) to IN on your cable box and VHF/UHF on your TV.
- 2 Using a coaxial connector, connect OUT on your cable box to IN on your VCR.
- 3 Using A/V connectors, connect AUDIO and VIDEO OUT on your VCR to AUDIO and VIDEO IN on your TV.

Disconnect all power sources before making any connections.



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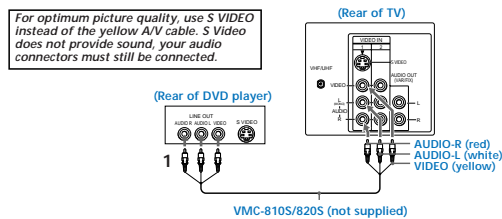
## Additional Connections

The following connections are for accessories that will enhance your viewing options.

### Connecting a DVD Player

- 1 Using A/V connectors, connect LINE OUT on your DVD to VIDEO IN on your TV.

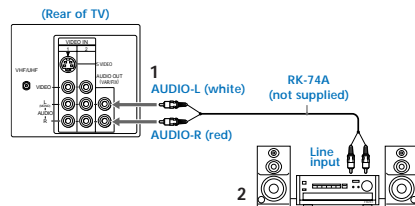
Disconnect all power sources before making any connections.



### Connecting an audio system

For enhanced sound, connect your audio system to your TV.

- 1 Using AUDIO connectors, connect AUDIO OUT on your TV to one of the unused line inputs (e.g. TV, AUX, TAPE 2) on your stereo.
- 2 Set your stereo to the chosen line input. Refer to page 24 of this manual for additional audio setup instructions.



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## Connecting and Installing the TV (continued)

## DBS Connections

### Connecting a DBS (Direct Broadcast Satellite) receiver

- 1 Connect the cable from your satellite antenna to your DBS receiver.
- 2 Attach the coaxial connector from your cable or antenna to VHF/UHF IN on your TV.
- 3 Using A/V connectors, connect AUDIO and VIDEO OUT on your DBS receiver to AUDIO and VIDEO IN on your TV.

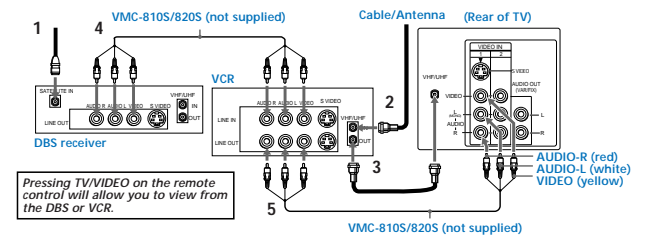
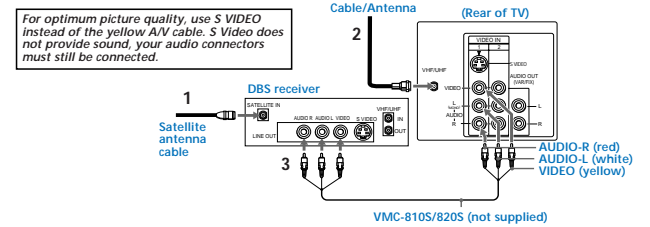
### Connecting a DBS (Direct Broadcast Satellite) receiver and a VCR

- 1 Connect the cable from your satellite antenna to your DBS receiver.
- 2 Attach the coaxial connector from your cable or antenna to VHF/UHF IN on your VCR.
- 3 Using a coaxial connector, connect VHF/UHF OUT on your VCR to VHF/UHF on your TV.
- 4 Using A/V connectors, connect AUDIO and VIDEO OUT on your DBS receiver to AUDIO and VIDEO IN on your VCR.
- 5 Using A/V connectors, connect AUDIO and VIDEO OUT on your VCR to AUDIO and VIDEO IN on your TV.

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Disconnect all power sources before making any connections.

For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S Video does not provide sound, your audio connectors must still be connected.



## Connecting and Installing the TV (continued)

### Connecting an A/V receiver

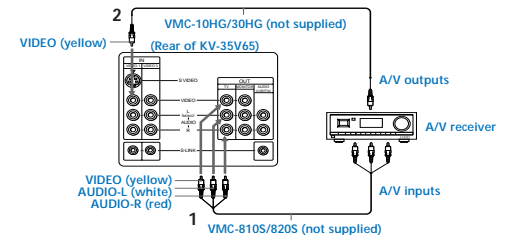
- KV-32V65, 35V65 only

- 1 Using A/V cables, connect TV OUT on your TV to TV IN on your A/V receiver.
- 2 Using a single video connector, connect Monitor OUT on your A/V receiver to VIDEO 1 IN on your TV.

Tip

You may want to use CHANNEL FIX to set your TV's input to the A/V receiver. See page 26.

Disconnect all power sources before making any connections.



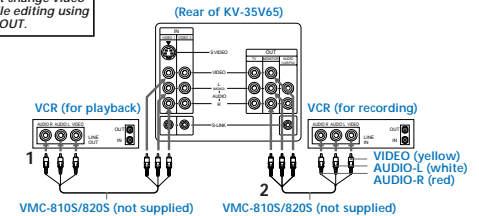
### Connecting two VCRs

- KV-32V40, 32V65, 35V65 only

MONITOR OUT gives you the ability to use a second VCR to record a program being played by the primary VCR or to perform tape editing and dubbing.

- 1 Connect the VCR intended for playback using the setup instructions on page 7 of this manual.
- 2 Using A/V connectors, connect AUDIO and VIDEO IN on your VCR intended for recording to MONITOR AUDIO and VIDEO OUT on your TV.

You cannot change video inputs while editing using MONITOR OUT.



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## Connecting a camcorder

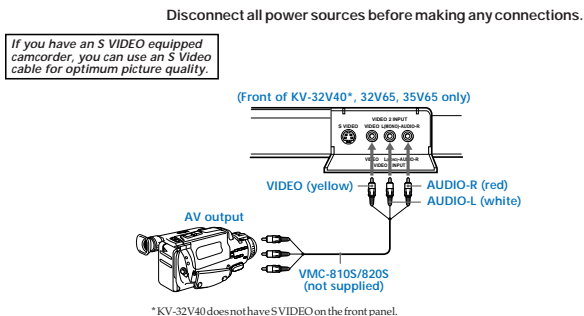
This connection is convenient for viewing a picture directly from your camcorder.

Using A/V connectors, connect AUDIO and VIDEO OUT on your camcorder to AUDIO and VIDEO IN on your TV.

Connection can also be made directly to your A/V input located on the rear of your TV.

### Note

- If you are connecting a monaural camcorder, connect only the single white audio output to the left input on your TV.



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## Connecting and Installing the TV (continued)

### S-Link connections

- KV-32S65, 32V65, 35S65, 35V65 only

S-Link is designed to allow your Sony components to "communicate".

#### Connecting S-Link to a VCR

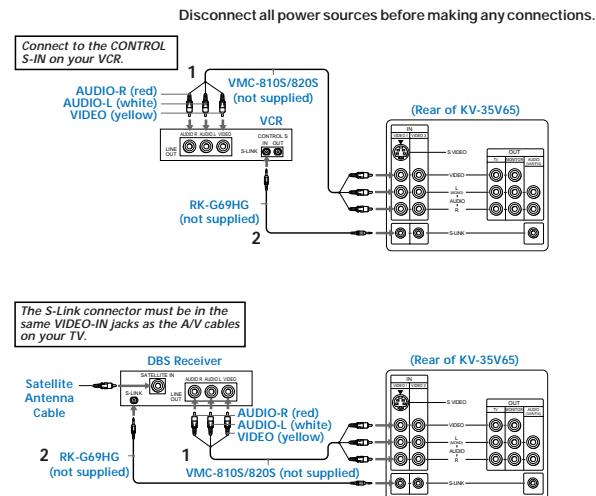
S-Link will automatically power on the TV and switch to the correct video input when a tape is inserted in the VCR.

- Using A/V connectors, connect AUDIO and VIDEO OUT on your VCR to AUDIO and VIDEO IN on your TV.
- Using an S-Link connector (mono mini plug), connect S-LINK/CONTROL S-IN on your VCR to S-LINK on your TV.

#### Connecting S-Link to a DBS

S-Link will automatically power on the TV and switch to the correct video input when you power on the DBS.

- Using A/V connectors, connect AUDIO and VIDEO OUT on your DBS to AUDIO and VIDEO IN on your TV.
- Using an S-Link connector (mono mini plug), connect S-LINK on your DBS to S-LINK on your TV.



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## Operating Video Equipment

### Programming the remote

You can use the supplied remote control to operate Sony or non-Sony video equipment.

- Press CODE SET.
- Press VTR/DVD (FUNCTION).
- Use the 0-9 buttons to key in the manufacturer's code number from the following chart.
- Press ENTER.

#### VCR code numbers

Manufacturer	Code	Manufacturer	Code
Sony	301, 302, 303	Tatung	314, 336, 337
Admiral (M. Ward)	327	Teac	314, 336, 338, 337
Aiwa	338, 344	Technics	309, 308
Audio Dynamic	314, 337	Toshiba	312, 311
Broksonic	319, 317	Wards	327, 328, 335, 331, 332
Canon	309, 308	Yamaha	314, 330, 336, 337
Citizen	332	Zenith	331
Craig	302, 332		
Criterion	315		
Curtis Mathis	304, 338, 309		
Daewoo	341, 312, 309		
DBX	314, 336, 337		
Dimensia	304		
Emerson	319, 320, 316, 317, 318, 341		
Fisher	330, 335		
Funai	338		
General Electric	329, 304, 309		
Go Video	322, 339, 340		
Goldstar	332		
Hitachi	306, 304, 305, 338		
Instant Replay	309, 308		
JC Penney	309, 305, 304, 330, 314, 336, 337		
JVC	314, 336, 337, 345, 346, 347		
Kenwood	314, 336, 332, 337		
LXI (Sears)	332, 305, 330, 335, 338		
Magnavox	308, 309, 310		
Marantz	314, 336, 337		
Marta	332		
Memorex	309, 335		
Minolta	305, 304		
Mitsubishi/MGA	323, 324, 325, 326		
Multitech	325, 338, 321		
NEC	314, 336, 337		
Olympic	309, 308		
Optimus	327		
Panasonic	308, 309, 306, 307		
Pentax	305, 304		
Philco	308, 309		
Philips	308, 309, 310		
Pioneer	308		
Quasar	308, 309, 306		
RCA/PROSCAN	304, 305, 308, 309, 311, 312, 313, 310, 329		
Realistic	309, 330, 328, 335, 324, 338		
Sansui	314		
Samsung	322, 313, 321		
Sanyo	330, 335		
Scott	312, 313, 321, 335, 323, 324, 325, 326		
Sharp	327, 328		
Shintom	315		
Signature 2000 (M. Ward)	338, 327		
SV2000	338		
Sylvania	308, 309, 338, 310		
Symphonic	338		

Operating a VCR	Buttons on the remote control
To turn on or off	Press VTR/DVD (POWER).
To select a channel directly	Press the 0 - 9 buttons.
To change channels	Press CH +/-.
To record	Press  and  simultaneously.
To play	Press .
To stop	Press .
To fast forward	Press .
To rewind the tape	Press .
To pause	Press .
	To resume normal playback, press again or press .
To scan	Press  or  during playback.
	To resume normal playback, release the button.
To change input mode	Press TV/VTR.

### Tips

- In some rare cases, you may not be able to operate your non-Sony video equipment with the supplied remote control. In this case, please use the equipment's own remote control.
- When you remove the batteries, the code number may revert to the factory setting.
- The code numbers for Sony VCR's are assigned at the factory as follows:

VHS VCR	301
	(preset code for the supplied remote control)
8 mm VCR	302
Beta, ED Beta VCRs	303

### MDP (Multi Disc Player) code numbers

Manufacturer	Code
Sony	701
Panasonic	704, 710
Pioneer	702

#### Operating an MDP Buttons on the remote control

To turn on or off	Press VTR/DVD (POWER).
To play	Press .
To stop	Press .
To pause	Press .
	To resume normal playback, press again or press .
To scan	Press  or  during playback.
	To resume normal playback, press .
To search the chapter forward or backward	Press CH +/-.

### Tip

If you will not be programming a DBS or cable box into the DBS/CABLE input, you can use it to program other video equipment (e.g. DVD, MDP, or second VCR). (see page 30)

### DVD (Digital Versatile Disc) code numbers

Manufacturer	Code
Sony	751
Panasonic	753
Pioneer	752
RCA	755
Toshiba	754

#### Operating a DVD player Buttons on the remote control

To turn on or off	Press VTR/DVD (POWER).
To play	Press .
To stop	Press .
To pause	Press .
	To resume normal playback, press again or press .
To scan	Press  or  during playback.
	To resume normal playback, press .
To search the chapter forward or backward	Press CH +/-.

To select chapters directly	0-9 + ENTER.
MENU	Press to display DVD menu.
To move cursor in menu	Use your arrow buttons , , , .

Operating a Cable Box or DBS Receiver

Programming the remote

You can program the supplied remote control to operate a cable box or DBS receiver.

- 1 Press CODE SET.
- 2 Press DBS/CABLE (FUNCTION).
- 3 Use the 0-9 buttons to key in the manufacturer's code number from the following chart.
- 4 Press ENTER.

For more details on operating the cable box or DBS receiver

Refer to the operating instructions that were supplied with the equipment.

If the remote control doesn't work

- First, try repeating the setup procedures using the other codes listed for your equipment.

Tips

- If more than one code number is listed, try entering them one by one until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, you may not be able to operate your equipment with the supplied remote control. In this case, use the equipment's supplied remote control.
- Whenever you remove the batteries the code numbers may revert to the factory setting.

Cable box code numbers

Manufacturer	Code
Hamlin/Regal	222, 223, 224, 225, 226
Jerrold/G. I.	201, 202, 203, 204, 205, 206, 207, 208, 218
Oak	227, 228, 229
Panasonic	219, 220, 221
Pioneer	214, 215
Scientific Atlanta	209, 210, 211
Tocom	216, 217
Zenith	212, 213

DBS receiver code numbers

Manufacturer	Code
Sony	801 (preset code for remote control)
General Electric	802
Hitachi	805
Hughes	804
Panasonic	803
RCA/PROSCAN	802, 808
Toshiba	806, 807

Troubleshooting

Consult the table below; it suggests solutions to specific problems.

Problem	What it could be	What you can do
Cannot operate single tuner PIP (KV-32S45, 35S45)	<ul style="list-style-type: none"><li>• VCR may not be connected to your TV properly.</li><li>• VCR may not be turned on.</li><li>• The remote control may not be programmed to operate the VCR.</li></ul>	<ul style="list-style-type: none"><li>• Ensure that you have set your VCR correctly. (see page 7)</li><li>• Program your remote control to operate the VCR. (see page 30)</li></ul>
A red light keeps flashing on the TV for more than a few seconds	<ul style="list-style-type: none"><li>• Your TV may need service.</li></ul>	<ul style="list-style-type: none"><li>• Call your local Sony service center.</li></ul>
TV makes a noise when turned on	<ul style="list-style-type: none"><li>• This is a normal function of your TV.</li></ul>	
Screen is not lit and there is no sound	<ul style="list-style-type: none"><li>• Power cord may not be plugged in.</li><li>• Batteries may not have been placed with the correct polarity.</li><li>• TV/VIDEO setting may be incorrect.</li></ul>	<ul style="list-style-type: none"><li>• Press TV/VIDEO until you receive a channel.</li></ul>
Poor or no picture (screen lit), good sound	<ul style="list-style-type: none"><li>• VIDEO menu settings may not be adjusted correctly.</li><li>• Antenna/cable connections may be faulty.</li><li>• VIDEO LABEL inputs may be set to WEB. (This label darkens the screen for ideal WebTV viewing)</li></ul>	<ul style="list-style-type: none"><li>• Readjust your VIDEO menu settings. (see page 22)</li><li>• Check your VIDEO LABEL settings. (see page 28)</li></ul>
Good picture, no sound	<ul style="list-style-type: none"><li>• Sound may be set to MUTE.</li><li>• Your TV may be set to SAP.</li><li>• Speaker may not be set correctly.</li></ul>	<ul style="list-style-type: none"><li>• Press MUTE.</li><li>• Check the MTS setting in the AUDIO menu. (see page 23)</li><li>• Check your SPEAKER settings. (see page 23)</li></ul>
No color	<ul style="list-style-type: none"><li>• Color settings may not be adjusted correctly.</li></ul>	<ul style="list-style-type: none"><li>• Adjust the COLOR settings in the VIDEO menu. (see page 22)</li></ul>

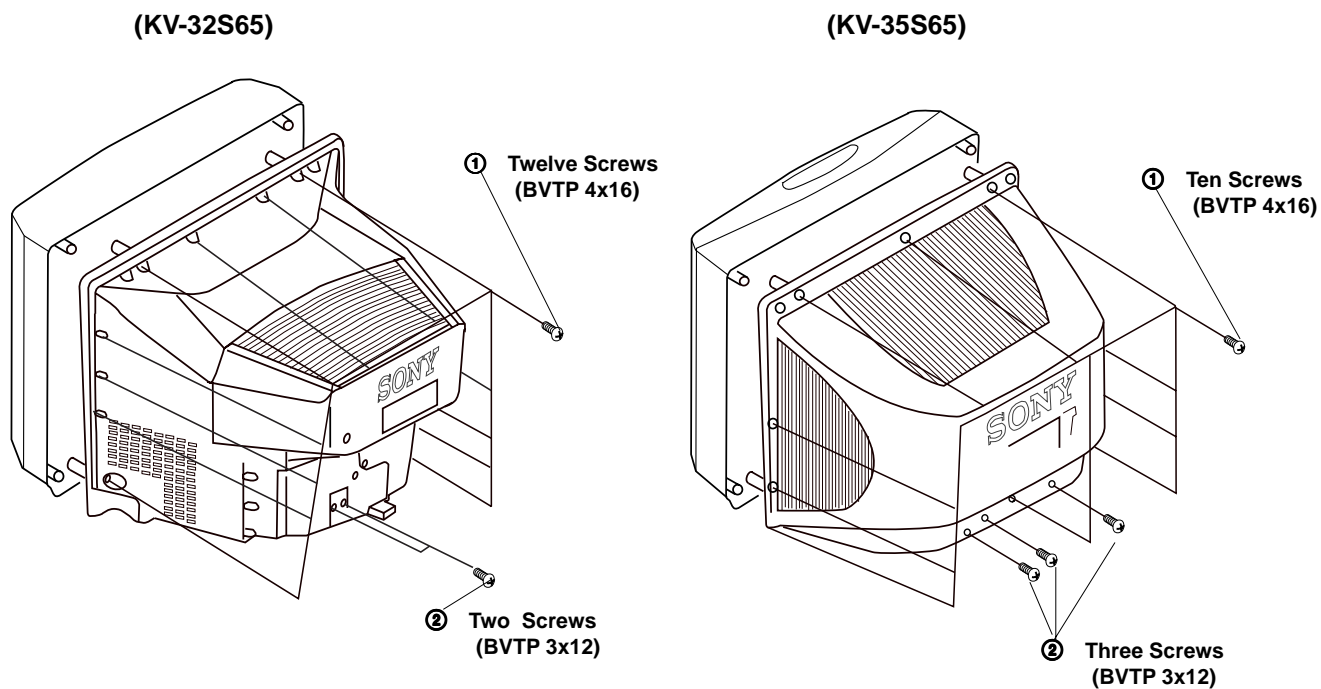
Problem	What it could be	What you can do
Only snow and noise appear on the screen	<ul style="list-style-type: none"><li>• CABLE may not be set correctly in the SET UP menu.</li><li>• Antenna/cable connections may not be correct.</li><li>• TV may be set to AUX mode.</li></ul>	<ul style="list-style-type: none"><li>• Ensure that you have selected the correct CABLE mode in the SET UP menu. (see page 26)</li><li>• Press ANT on your remote control to change the input mode. (see page 16)</li></ul>
Cannot receive upper channels (UHF) when using an antenna	<ul style="list-style-type: none"><li>• CABLE setting may not be correct in the SET UP menu.</li></ul>	<ul style="list-style-type: none"><li>• Ensure that CABLE is set to OFF in the SET UP menu. (see page 26)</li><li>• Use AUTO PROGRAM to add receivable channels that are not presently in TV memory. (see page 26)</li></ul>
Cannot receive any channels when using cable	<ul style="list-style-type: none"><li>• CABLE setting may not be set correctly in the SET UP menu.</li></ul>	<ul style="list-style-type: none"><li>• Ensure that CABLE is set to ON in the SET UP menu. (see page 26)</li><li>• Use AUTO PROGRAM to add receivable channels that are not presently in TV memory. (see page 26)</li></ul>
Cannot gain enough volume when using a cable box	<ul style="list-style-type: none"><li>• Volume may not be adjusted on your cable box.</li></ul>	<ul style="list-style-type: none"><li>• Press TV (FUNCTION) and adjust the TV's volume.</li></ul>
TV is fixed to one channel	<ul style="list-style-type: none"><li>• CHANNEL FIX settings may not be correct.</li></ul>	<ul style="list-style-type: none"><li>• Check your CHANNEL FIX settings. (see page 26)</li></ul>

If, after reading these operating instructions, you have additional questions related to the use of your Sony television, please call our Direct Response Center at 1-800-222-SONY (7669). (U.S. residents only)

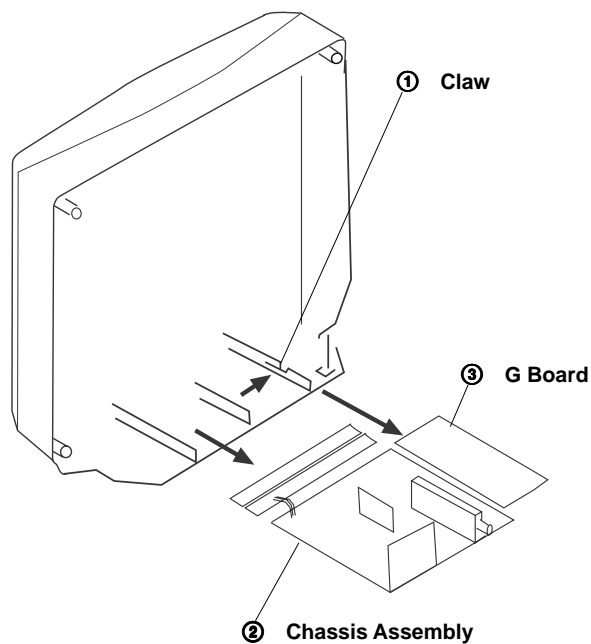


## SECTION 2 DISASSEMBLY

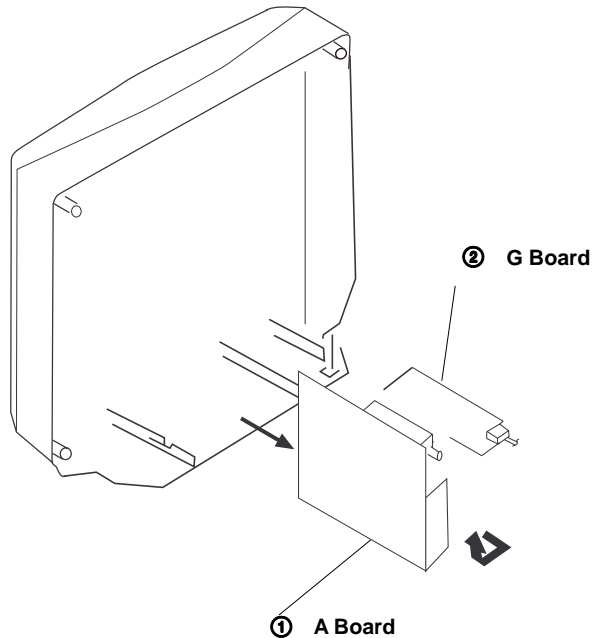
### 2-1. REAR COVER REMOVAL



### 2-2. CHASSIS ASSEMBLY REMOVAL



## 2-3. SERVICE POSITION

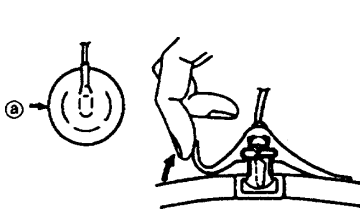


## ANODE-CAP REMOVAL

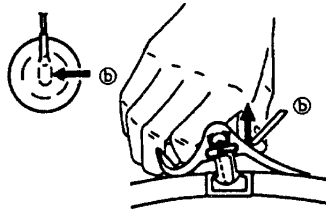
**WARNING:** High voltage remains in the CRT even after the power is disconnected. To avoid electrical shock, discharge CRT before attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.

**NOTE:** After removing the anode, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield or carbon painted on the CRT.

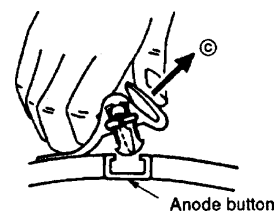
## REMOVAL PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by arrow ①.



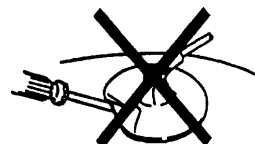
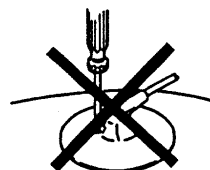
② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow ②.



③ When one side of the rubber cap separates from the anode button, the anode-cap can be removed by turning the rubber cap and pulling it in the direction of arrow ③.

## HOW TO HANDLE AN ANODE-CAP

- ① Do not use sharp objects which may cause damage to the surface of the anode-cap.
- ② Do not squeeze the rubber covering too hard to avoid damaging the anode-cap. A material fitting called a shatter-hook terminal is built into the rubber.
- ③ Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.

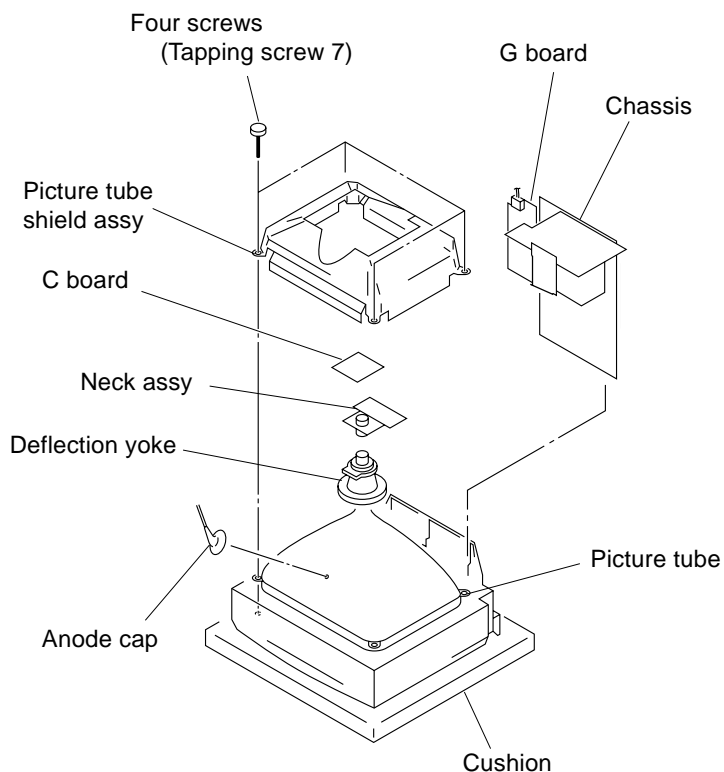
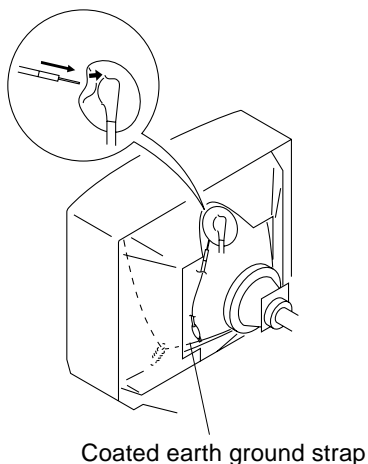


## 2-4-1. PICTURE TUBE REMOVAL (KV-32S65)

### WARNING -- Before removing anode cap:

High voltage remains in the CRT even after the power is disconnected.

To avoid electrical shock, discharge CRT before attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.

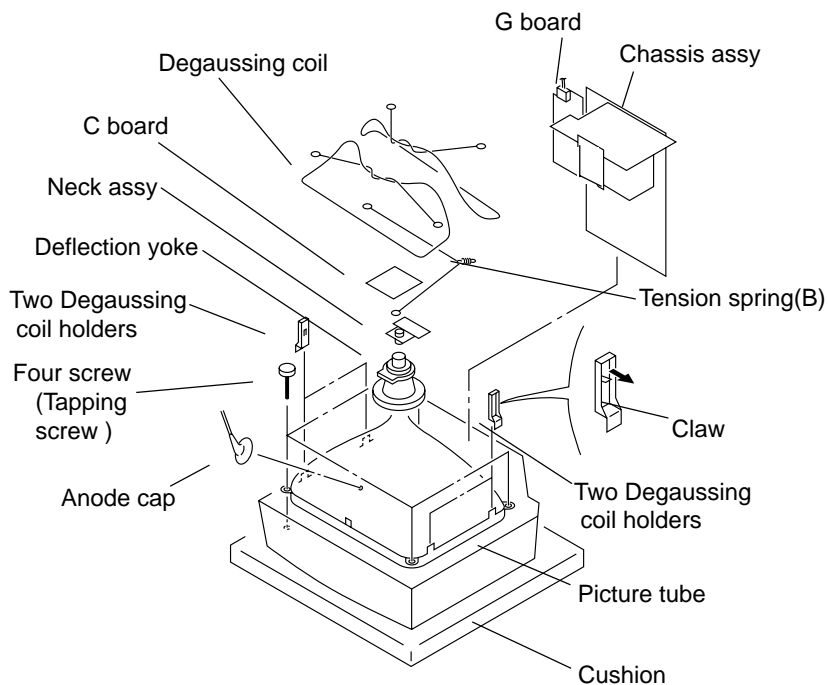
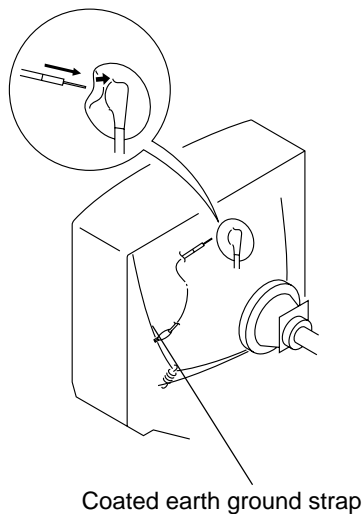


## 2-4-2. PICTURE TUBE REMOVAL (KV-35S65)

### WARNING -- Before removing anode cap:

High voltage remains in the CRT even after the power is disconnected.

To avoid electrical shock, discharge CRT before attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.



## SECTION 3 SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and switch should be set as follows unless otherwise noted:

PICTURE control ..... normal

BRIGHTNESS control ..... normal

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G2)/White Balance

**Note:** Test Equipment Required

1. Color Bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital Multimeter

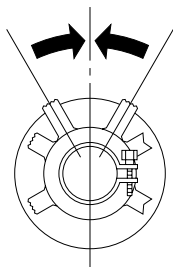
### 3-1. BEAM LANDING

#### Preparation:

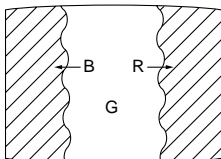
- Input a white pattern signal.
- Face the picture tube in a East or West direction to reduce the influence of geomagnetism.

NOTE: Do not use the hand degausser because it magnetizes the CRT .

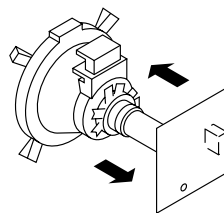
1. Input white pattern from pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown below:



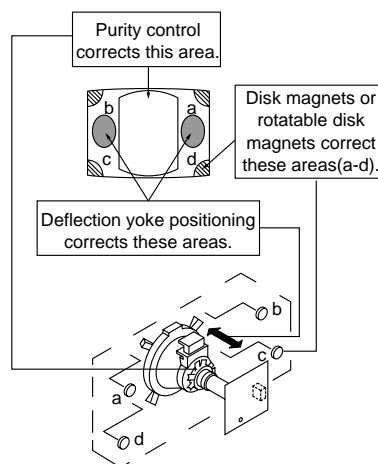
3. Input green pattern from pattern generator.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are even on both sides.



5. Move the deflection yoke forward, and adjust so that the entire screen becomes green.



6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. When landing at the corner is not right, adjust by using the disk magnets.



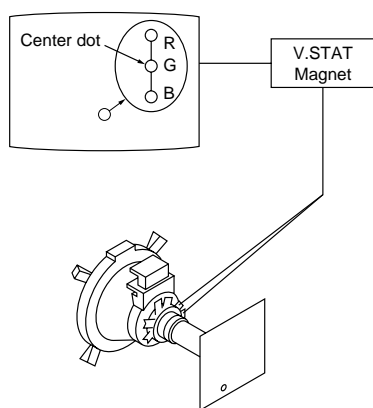
## 3-2. CONVERGENCE

### Preparation:

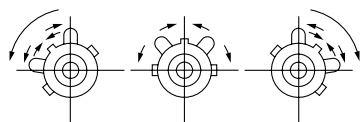
- Before starting, perform FOCUS, V. LIN and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Input dot pattern.

### (1) Vertical and Horizontal Static Convergence

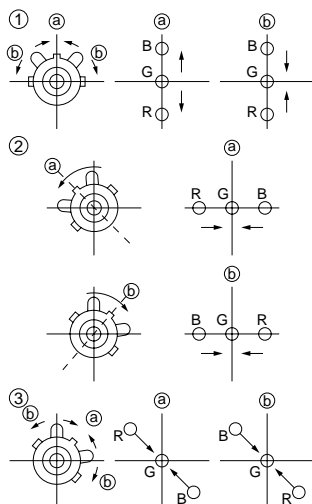
1. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)



Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.



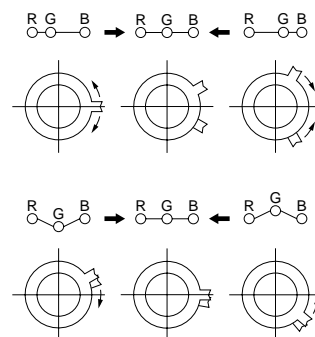
2. When the V. STAT magnet is moved in the direction of arrow ① and ②, red, green, and blue dots move as shown below:



### Operation of BMC (Hexapole) Magnet

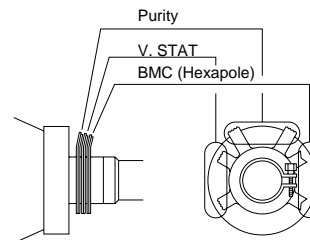
The respective dot positions resulting from moving each magnet interact, so perform adjustment while tracking.

Use the VSTAT tabs to adjust the red, green, and blue dots so they line up at the center of the screen (move the dots in a horizontal direction.)



### Y Separation Axis Correction Magnet Adjustment

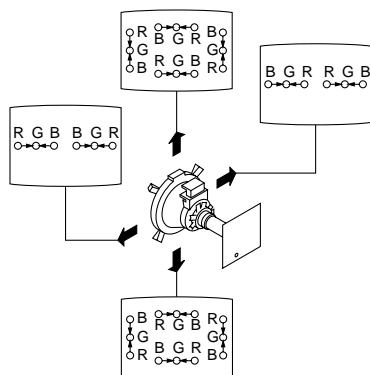
1. Input cross-hatch pattern, adjust PICTURE to minimum and BRIGHTNESS to normal.
2. Adjust the deflection yoke upright so it touches the CRT.
3. Adjust so that the Y separation axis correction magnet on the neck assembly is symmetrical from top to bottom (open state).



4. Return the deflection yoke to its original position.

## (2) Dynamic Convergence Adjustment

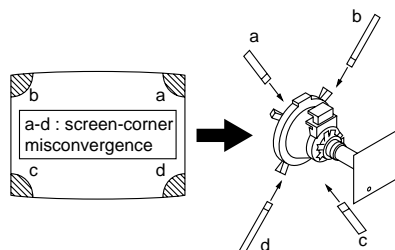
- Before starting, perform Horizontal and Vertical Static Convergence Adjustment.
- Slightly loosen deflection yoke screw.
  - Remove deflection yoke spacers.
  - Move the deflection yoke for best convergence as shown below:



- Tighten the deflection yoke screw.
- Install the deflection yoke spacers.

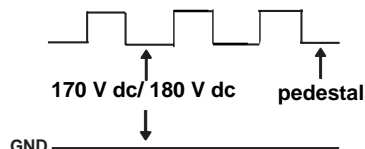
## (3) Screen-corner Convergence

Affix a permalloy assembly corresponding to the misconverged areas:



## 3-4. SCREEN (G2)

- Input dot pattern from the pattern generator.
- Set the PICTURE and BRIGHT controls at normal.
- Adjust S BRT, G CUT, B CUT in service mode with an oscilloscope so that voltages on the red, green, and blue cathodes are 170Vdc for 35" and 180Vdc for 32".
- Observe the screen and adjust SCREEN (G2) VR to obtain the faintly visible background of dot signal.



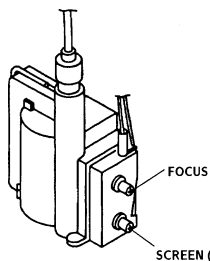
## 3-5. WHITE BALANCE ADJUSTMENTS

NO.	Disp.	Item	Avg/32"	Avg/35"
16	GDRV	Green Drive	33	45
17	BDRV	Blue Drive	33	45
18	GCUT	Green Cut-off	3	6
19	BCUT	Blue Cut-off	2	6
23	SBRT	Sub Bright	14	10

- Input an entire white signal.
- Set to Service adjustment Mode.
- Set DCOL to "0".
- Set the PICTURE and BRIGHT to minimum.
- Adjust with SBRT if necessary.
- Select GCUT and BCUT with [1] and [4].
- Adjust with [3] and [6] for the best white balance.
- Set the PICTURE and BRIGHT to maximum.
- Select GDRV and BDRV with [1] and [4].
- Adjust with [3] and [6] for the best white balance.
- Reset DCOL to "1".
- Write into the memory by pressing [MUTING] then [ENTER]\*\*.

## 3-3. FOCUS

Adjust FOCUS control for best picture.



## SECTION 4 SAFETY RELATED ADJUSTMENTS

### R530, R531 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

Always perform the following adjustments when replacing the following components marked with a ■ mark on the schematic diagram:

**A BOARD:** IC351, IC501, D519, D520, D521, C531, C532, R387, R529, R530, R531, R532, R533, R550, T503

**G BOARD:** IC643, R661

#### Step 1 Preparation before Confirmation

Turn the POWER switch ON.

Input a white signal and set the PICTURE and BRIGHT controls to maximum.

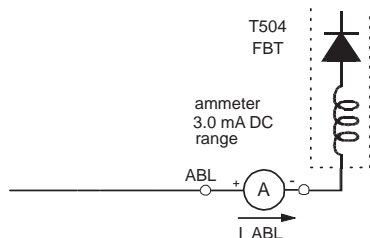
Confirm that the voltage at the check terminal of TP85 is more than 18.0 V DC when the set is operating normally.

At AC input:  $120.0 \pm 2.0$  VAC

#### Step 2

Input a white signal and verify that I ABL is within the specified range:  $2160 \pm 100$   $\mu$ A.

At AC input:  $120.0 \pm 2.0$  VAC



#### Step 3

Record the voltage between TP85 and ground.

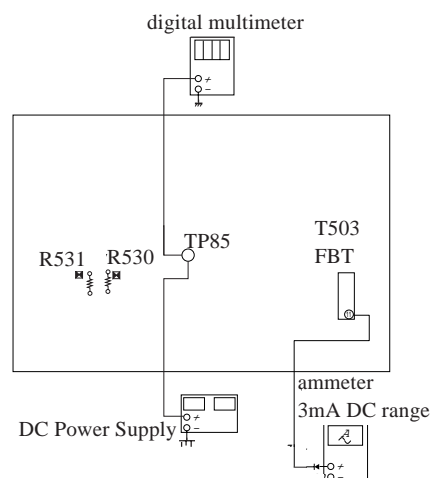
#### Step 4

Using an external DC power supply, apply voltage between TP85 and ground.

Increase the voltage gradually and confirm that the holdown works (raster disappears) at lower than the voltage recorded in Step 3.

Lower than 22.05 V DC

At AC input:  $120.0 \pm 2.0$  VAC



**A BOARD - CONDUCTOR SIDE**

#### Step 5

Confirm that a voltage of more than 18.0 V DC appears between TP85 and ground.

At AC input:  $120.0 \pm 2.0$  VAC

### B+ VOLTAGE CONFIRMATION AND ADJUSTMENT

Always perform the following adjustments when replacing the following components marked with ■ on the schematic diagram:

**G BOARD:** IC643, R661

- 1) Using Variac, apply AC input voltage:  $130 \pm 2.0$  VAC
- 2) Input a monoscope signal.
- 3) Set the PICTURE control and the BRIGHT control to initial reset value.
- 4) Confirm the voltage of G BOARD CN641 between pin ① to ground is less than  $135.5 \pm 1.0$  V DC.
- 5) If step 4 is not satisfied, replace the R661 and repeat the above steps.

## SECTION 5 CIRCUIT ADJUSTMENTS

### ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

Use Remote Commander (RM-Y167) to perform the following circuit adjustments:

NOTE : Test Equipment Required:

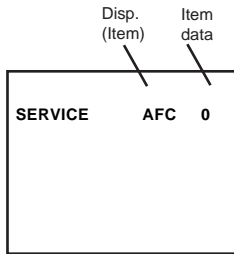
1. Pattern Generator
2. Frequency Counter
3. Digital Multimeter
4. Audio OSC

#### (1) Method of Setting the Service Adjustment Mode

##### SERVICE MODE PROCEDURE

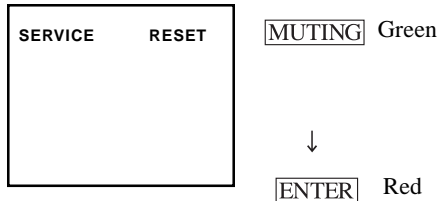
1. Standby mode. (Power off)
2. **DISPLAY** → **5** → **VOL (+)** → **POWER** on the Remote Commander.  
(Press each button within a second.)

##### SERVICE ADJUSTMENT MODE IN

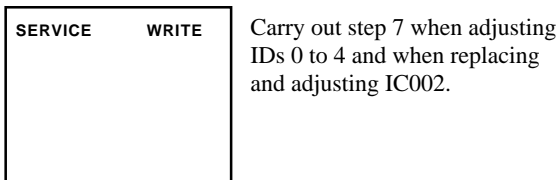


3. The CRT displays the item being adjusted.
4. Press **1** or **4** on the Remote Commander to select the item.
5. Press **3** or **6** on the Remote Commander to change the data.
6. Press **MUTING** then **ENTER** to write into memory\*\*.

##### SERVICE ADJUSTMENT MODE MEMORY



7. Press **8** then **ENTER** on the Remote Commander to initialize.

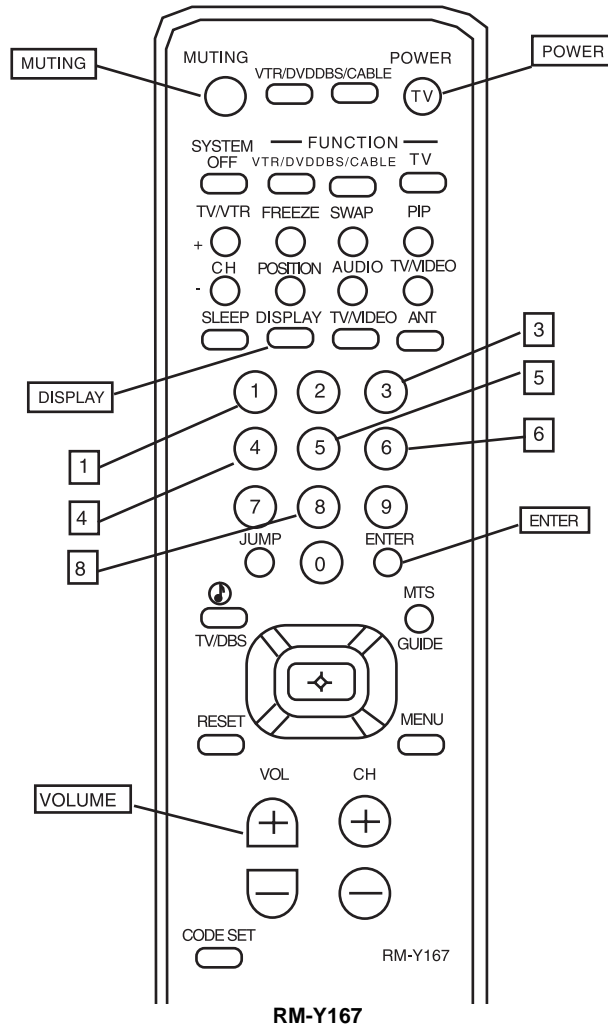


8. Turn set off and on to exit. \* CAUTION: Wait at least 10 seconds before turning off set.

#### (2) Memory Write Confirmation Method

1. After adjustment, pull out the plug from the AC outlet, then replace the plug in the AC outlet again.
2. Turn the power switch ON and set to Service Mode.
3. Call the adjusted items again to confirm they were adjusted.

#### (3) Adjust Buttons and Indicator



\*\*WARNING: Do NOT turn off the power or AC immediately after pressing **MUTING** then **ENTER**. Wait at least 10 seconds.



## (4) Service Data

No.	Register Name	Description	Data	Adj/Fix	Initial	Average Data		Comments
			Range			Data	32"	
VP CXA2095S								
1	VPOS	V-Position	0-63	Adj	20	23	33	0:Down, 63:Up
2	VSIZ	V-Size	0-63	Adj	20	27	52	0:Min, 63:Max
3	VCOM	V-Compensation	0-3	Fix	1	1		0:Min, 3:Max
4	VLIN	V-Linearity	0-15	Adj	7	9		0:Min, 15:Max
5	VSCO	S-Correction	0-15	Adj	7	6	9	0:Min, 15:Max
6	HPOS	H-Position	0-15	Adj	7	11	10	0:Right, 15:Left
7	HSIZ	H-Size	0-63	Adj	20	23	39	0:Min, 63:Max
8	PAMP	Pin Compensation	0-63	Adj	31	27	19	0:Min, 63:Max
9	UPIN	Upper Corner Pin	0-15	Adj	7	4	7	0:Min, 15:Max
10	LPIN	Lower Corner Pin	0-15	Adj	7	6	10	0:Min, 15:Max
11	PPHA	Pin Phase	0-15	Adj	7	4	5	0:Min(small picture), 15:Max
12	AFC	AFC	0-3	Fix	2	2		0:Freerun, 1:Min, 3:Max
13	VBOW	AFC Bow	0-15	Adj	7	6	5	0:Right, 15:Left
14	VANG	AFC Angle	0-15	Adj	7	6	4	0:Right, 15:Left
15	REF	Reference Line	0-3	Fix	2	2		0:22H(Rch), 3:16H(Rch)
16	GDRV	Green Drive	0-63	Adj	31	22	35	0:Min, 63:Max
17	BDRV	Blue Drive	0-63	Adj	31	30	26	0:Min, 63:Max
18	GCUT	Green Cutoff	0-15	Adj	7	5	8	0:Min, 15:Max
19	BCUT	Blue Cutoff	0-15	Adj	7	7	6	0:Min, 15:Max
20	SCON	Sub Contrast	0-15	Adj	7	10	8	0:Min, 15:Max
21	SHUE	Sub Hue (RF only)	0-15	Adj	7	7 (flat-1)	8 (flat-1)	0:+10deg, 15:-10deg
22	1SHU	Sub Hue (composite & S-video)	0-15	Adj	7	7	7	0:+10deg, 15:-10deg
23	SCOL	Sub Color (RF only)	0-15	Adj	7	11 (flat+2)	9 (flat+2)	0:Min, 15:Max
24	1SCO	Sub Color (composite & S-video)	0-15	Adj	7	14	13	0:Min, 15:Max
25	SBRT	Sub Brightness	0-63	Adj	31	26		0:Min, 63:Max
26	SSHP	Sub Sharpness (RF & Composite video)	0-15	Fix by model	7	8	8	0:Min, 15:Max
27	1SSP	Sub Sharpness (S-video only)	0-15	Fix by model	7	10	10	0:Min, 15:Max
28	GMMA	Gamma Correction	0-3	Fix by model	1	0	0	0:Off, 1:Min, 3:Max
29	CDM2	Countdown Mode 2	0-1	Fix	0	0		0: Normal 1: High Speed Countdown Response
30	EYSW	External Y Switch	0-1	Fix	0	0		0: Normal 1: EYin disabled
31	DPIX	Dynamic Picture	0,1	Fix	1	1		0:Off, 1:On
32	Y-DC	DC Transmission Ratio	0,1	Fix	1	1		0:100%, 1:82%
33	ABLM	ABL Mode	0,1	Fix	1	1		0:PictureABL, 1:Picture/BrightnessABL
34	AXIS	Color Demodulation Axis	0,1	Fix	1	1		0:Japan, 1:US
35	NOTC	Chroma Trap Filter	0,1	Fix	0	0		0:Off, 1:On
36	CROM	Chroma Trap Adjust	0-15	Fix	7	7		0:+300kHz, 1:-300kHz
37	TOT	TOT Filter (RF only)	0,1	Fix	1	1		0:Off, 1:On
38	1TOT	TOT Filter (Composite & S-video)	0,1	Fix	1	0		0:Off, 1:On
39	PREL	Pre/Overshoot Ratio (RF & Composite)	0-3	Fix by model	3	1		0: 2:1, 3: 5:1
40	1PRE	Pre/Overshoot Ratio (S-video only)	0-3	Fix by model	3	3		0: 2:1, 3: 5:1
41	SHPF	Sharpness fo (RF & Composite)	0-3	Fix by model	2	1		0:2.5MHz, 3:4.0MHz
42	1SPF	Sharpness fo (S-video only)	0-3	Fix by model	2	3		0:2.5MHz, 3:4.0MHz
43	RON	Red Off	0,1	Fix	1	1		0:Off, 1:On
44	GON	Green Off	0,1	Fix	1	1		0:Off, 1:On
45	BON	Blue Off	0,1	Fix	1	1		0:Off, 1:On
46	DCOL	Dynamic Color	0,1	Fix	0	1 (adjusts @ 0, but shipped as 1)		0:Off, 1:On
47	CDMD	V Countdown Mode	0,1	Fix	0	0		0:Auto, 1:Fix
48	HBSW	H Blanking Switch	0,1	Fix	0	0		0:Off, 1:On
49	LBLK	Left Blanking	0-15	Fix	0	7		0:Min, 15:Max
50	RBLK	Right Blanking	0-15	Fix	0	7		0:Min, 15:Max
AP CXA2021								
51	SVOL	Sub Volume	0-15	Fix	0	6		0:-0 Volume steps, 15:-15 Volume steps
52	SBAL	Sub Balance	0-15	Adj	7	7		0: +Right, 15:+Left
53	SBAS	Sub Bass	0-15	Fix by model	7	8	8	0:-7 Steps, 15: +8 steps
54	STRE	Sub Treble	0-15	Fix by model	7	10	10	0:-7 Steps, 15: +8 steps
MM1311/1313								
55	AUSW	Audio Att Sw	0,1	Fix	1	1		0:-6dB, 1:0dB (Only for VIDEO input)

## Service Data (cont.)

No.	Register Name	Description	Data	Adj/Fix	Initial Data	Average Data		Comments
			Range			32"	35"	
PI SDA9288								
56	PYSD	Select Delay	0-15	Fix by P-bd	3	3		0:Right, 15:Left
57	PIPH	PIP H-position	0-127	Fix	78	78		0:Right, 127:Left
58	PIPV	PIP V-position	0-63	Fix	18	18		0:Up, 63:Down
59	PYDL	PIP Y-delay	0-7	Fix	0	0		0:Right, 7:Left
60	PHDL	H-pulse delay	0-15	Fix by P-bd	3	0		0:Right, 15:Left
61	PMVD	Main V-pulse delay	0-31	Fix	16	16		7-21: Available (1-6/22-31 Not Avail)
62	PIVD	Inset V-pulse delay	0-31	Fix	22	22		16-28 Available (1-15/29-31 Not Avail)
63	PCON	Inset Contrast	0-15	Fix	7	7		0:Min, 15:Max
64	FRMY	Frame Y	0-15	Fix	7	7		0:Dark, 15:Bright
65	CHRI	Input Polarity	0,1	Fix by P-bd	1	1		0:+(B-Y)+(R-Y), 1:-(B-Y)-(R-Y)
66	CHRO	Output Polarity	0,1	Fix	1	1		0:+(B-Y)+(R-Y), 1:-(B-Y)-(R-Y)
67	IPER	Inset Pedestal R-Y	0-15	Fix	0	0		0:Center, 7:Max, 8:Min
68	IPEB	Inset Pedestal B-Y	0-15	Fix	0	0		0:Center, 7:Max, 8:Min
69	PCPS	CLPS Bit Control	0,1	Fix	0	0		0:Depend on HSIDEL, 1:Not depend
70	PCPF	CLPFIX Bit Control	0,1	Fix	0	0		0: 3Clamp line, 1: 2Clamp line
71	PSEL	SELDOWN Bit Control	0,1	Fix by P-bd	1	1		0:Open out, 1:TTL out
72	PPLL	PLL Filter Bits	0-3	Fix	0	0		Fixed value only
73	PVNR	VSPISQ VSP NR	0-1	Fix	0	1		SDA9288 IC bypass use 1
IC CXA2019								
74	ISCO	CDec Sub Contrast	0-15	Fix	7	15		PiP sub contrast
75	ISHP	CDec Sharpness	0-15	Fix	7	8		PiP sharpness
76	ISCL	CDec Sub Color	0-15	Fix	7	9		PiP sub color
77	ISHU	CDec Sub Hue	0-15	Fix	7	6		PiP sub hue
78	ITOT	CDec TOT on	0,1	Fix	0	1		PiP TOT 0:Off, 1:On
79	IAFC	CDec AFC	0-3	Fix	2	2		0:Max, 2:Min, 3:Freerun
80	ICD2	CDec Countdown Mode2	0,1	Fix	0	0		0:Standard, 1:Fast
81	IYDR	CDec Y drive	0-31	Fix	15	7		PiP Y-drive gain
82	IVPE	CDec V pedestal	0-15	Fix	7	6		PiP V-ped DC
83	IUPE	CDec U pedestal	0-15	Fix	7	6		PiP U-ped DC
84	IRVP	CDec RV pedestal	0-15	Fix	7	6		PiP V-ped DC (re-input)
85	IRUP	CDec RU pedestal	0-15	Fix	7	6		PiP U-ped DC (re-input)
86	IDCT	CDec DC transfer	0-7	Fix	2	0		PiP DC transfer 0:Max, 7:Min
87	IRYD	CDec RY drive	0-31	Fix	15	20		PiP RY Drive (re-input)
88	IABO	CDec ABL off	0,1	Fix	1	1		PiP ABL (RY-OUT) 0:On, 1:Off
89	IPRE	CDec Pre/Over shoot	0-3	Fix	3	3		PiP Pre/over shoot 0: 1:1, 1: 4:1
90	IRUD	CDec RU Drive	0-31	Fix	15	20		PiP RU-gain out 0:-6dB, 31:+3.3bD
91	IABL	CDec ABL	0,1	Fix	1	1		PiP ABL gain 0:Std, 1:Min
92	IABC	CDec ABL Cent	0-3	Fix	1	1		PiP ABL Center 0:Min, 1:Max
93	IRVD	CDec RV drive	0-31	Fix	15	17		PiP RY Drive (re-input)
94	IDLY	CDec Delay	0-3	Fix	0	0		PiP Y-delay 0:0ns, 1:60ns, 2:120ns, 3:180ns
95	ISCR	CDec SCP BGR	0-3	Fix	0	0		PiP SCP riseup phase 0:+0.4us, 1:cent, 2:-0.8us
96	ISCF	CDec SCP BGF	0-3	Fix	0	0		PiP SCP falldown phase 0:+0.4us, 1:cent, 2:-0.8us
CC CXP8584a-011s								
97	CRIL	CC CRI count low	0-15	Fix	2	2		7 Clock Run-In Lower Limit (field 1)
98	CFLD	CC Caption Fixed Field Count		Fix	5	5		Fixed value only
99	CCDI	CC CCD int	0-7	Fix	3	3		Fixed value only
100	CRIP	CC CRI & polarity	0-7	Fix	4	4		Fixed value only
101	CRIT	CC CRI time constant	0-3	Fix	1	1		Fixed value only
102	CSB1	CC Sync Slice Bias 1	0-3	Fix	3	3		Fixed value only
103	CSB2	CC Synce Slice Bias 2	0-7	Fix	4	4		Fixed value only
104	CREP	CC CRI signal end position	0-255	Fix	142	142		Fixed value only
105	CDSD	CC Data start delay	0-31	Fix	8	8		Fixed value only
106	CCDS	CC Caption data threshold	0-31	Fix	9	9		Fixed value only
107	CHMK	CC P8_HMASK	0-63	Fix	42	42		Hmask
108	CHSY	CC P8_HSYC	0-255	Fix	136	136		Hsync
109	DISP	TV OSD H Position	0-63	Adj	1	23		0:Off, 1:Left, 63: Right
110	RTCO	Rotation Coil	0-63	Fix	32	32		Fixed value only

**Service Data (cont.)**

No.	Register Name	Description	Data	Adj/Fix	Initial Data	Average Data		Comments
			Range			32"	35"	
ID MAP								
111	ID-0	ID-0 (Language/Color Systems)	0-255	Fix by model	89	refer to NVM ID Chart		See ID map
112	ID-1	ID-1 (Input/Output Configuration)	0-255	Fix by model	55			See ID map
113	ID-2	ID-2 (Audio)	0-255	Fix by model	175			See ID map
114	ID-3	ID-3 (OSD/Timer/V-chip/Ch Fix)	0-255	Fix by model	0			See ID map
115	ID-4	ID-4 (CC/Spot Killer/etc)	0-255	Fix by model	155			See ID map
116	ID-5	ID-5 (V-series Features/etc)	0-255	Fix by model	141			See ID map
117	ID-6	ID-6 (PiP/Ant Sw related)	0-255	Fix by model	6			See ID map
118	ID-7	ID-7 (Special Models/etc)	0-255	Fix by model	0			See ID map

SERVICE IDO 25

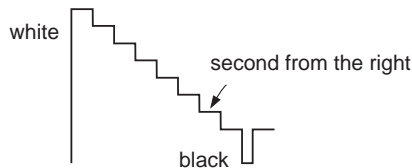
Note: Items 1-118 show adjustment order

**(5) Feature ID Map**

	KV-	DESTINATION	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6	ID-7
1	32S65	(US/CND)	89	21	31	10	27	133	6	0
2	35S65	(US/CND)	89	21	31	10	155	133	6	0

**SUB BRIGHT ADJUSTMENT (SBRT)**

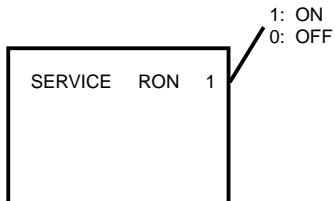
1. Set to Service adjustment Mode.
2. Input a gray scale pattern signal.
3. Set the PICTURE to minimum, and BRIGHT to normal.
4. Select SBRT with **[1]** and **[4]**.
5. Adjust SUB BRIGHT level with **[3]** and **[6]** so that the stripe second from the right is faintly visible.
6. Write into the memory by pressing **[MUTING]** then **[ENTER]\*\***.

**SUB CONTRAST ADJUSTMENT (SCON)**

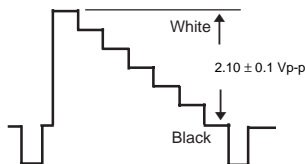
1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Select the item DCOL to "0" level.
4. Set the conditions as follows.

PICTURE ..... MAX  
 COLOR ..... MIN  
 BRIGHT ..... CENTER

R ON ..... ON (1)  
 G ON ..... OFF (0)  
 B ON ..... OFF (0)



5. Connect an oscilloscope probe to C Board, CN1761 pin ① (RED OUT).
6. Select SCON with **[1]** and **[4]**.
7. Adjust with **[3]** and **[6]** for:  $2.10 \pm 0.01$  Vp-p.



8. Reset the item DCOL to "1" level.
9. Write the memory by pressing **[MUTING]** then **[ENTER]\*\***.

10. Return the following back to normal after adjustment.

PICTURE ..... MAX  
 COLOR ..... CENTER  
 BRIGHT ..... CENTER

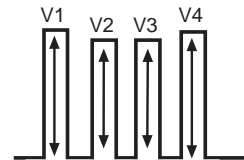
R ON ..... ON (1)  
 G ON ..... ON (1)  
 B ON ..... ON (1)

**DISPLAY POSITION ADJUSTMENT (DISP)**

1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Select DISP with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for adjustment of characters to center.
5. Write the memory by pressing **[MUTING]** then **[ENTER]\*\***.

**SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)**

1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Connect oscilloscope probe to C Board, CN1761 Pin ③ (BLUE OUT).
4. Select SHUE and SCOL with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the  $V1 = V4 \pm 0.1$  Vp-p (SCOL) and  $V2 = V3 \pm 0.1$  Vp-p (SHUE).



6. Change data according to the following table;

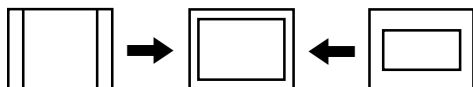
	SCOL	SHUE
32"	+2 steps	-1 steps
35"	+2 steps	-1 steps

7. Write into the memory by pressing **[MUTING]** then **[ENTER]\*\***.

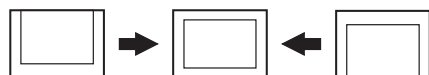
**\*\*WARNING:** Do NOT turn off the power or AC immediately after pressing **[MUTING]** then **[ENTER]**. Wait at least 10 seconds.

**V. SIZE ADJUSTMENT (VSIZ)**

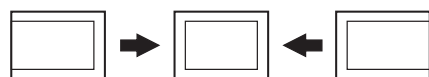
1. Input a cross-hatch signal.
2. Set to Service adjustment mode.
3. Select VSIZ with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best vertical size.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]\*\***.

**V. SIZE****V. POSITION ADJUSTMENT (VPOS)**

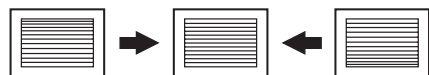
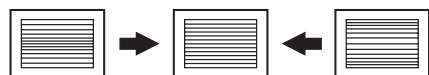
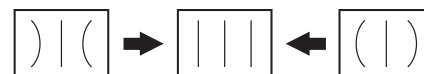
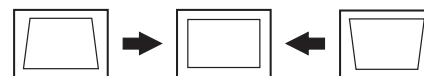
1. Input a cross-hatch signal.
2. Set to Service adjustment Mode.
3. Select VPOS with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best vertical center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]\*\***.

**V. POSITION****H. POSITION ADJUSTMENT (HPOS)**

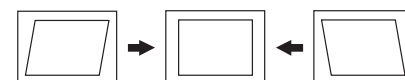
1. Input a cross-hatch signal.
2. Set the Service adjustment Mode.
3. Select HPOS with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best horizontal center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]\*\***.

**H. POSITION****V LINEARITY (VLIN), V CORRECTION (VSCO), PIN AMP (PAMP) AND PIN PHASE (PPHA) ADJUSTMENTS**

1. Input a cross-hatch signal.
2. Set to Service adjustment Mode.
3. Select VLIN, VSCO, PAMP, and PPHA with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best picture.
5. Write the memory by Pressing **[MUTING]** then **[ENTER]\*\***.

**V LINEARITY (VLIN)****VS CORRECTION (VSCO)****PIN AMP (PAMP)****PIN PHASE (PPHA)****V ANGLE (VANG), V BOW (VBOW), UPPER PIN (UPIN) AND LOW PIN (LPIN) ADJUSTMENTS**

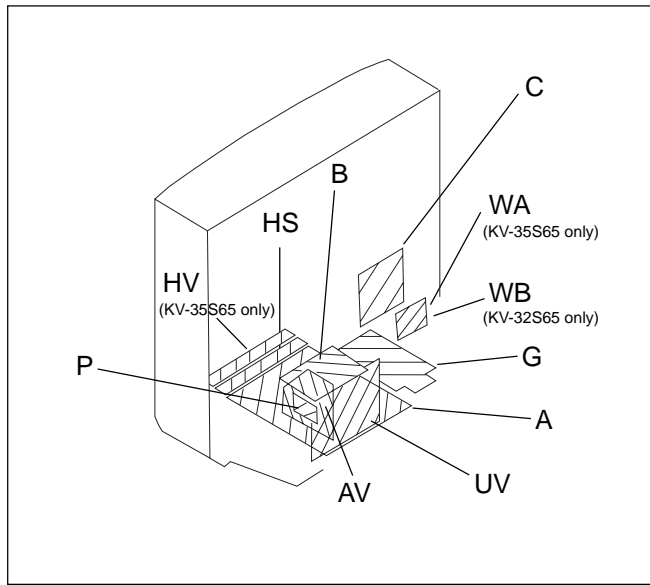
1. Input a cross hatch signal.
2. Set to Service adjustment Mode.
3. Select VVANG, VBOW, UPIN, and LPIN with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best picture.
5. Write the memory by Pressing **[MUTING]** then **[ENTER]\*\***.

**V ANGLE (VANG)****V BOW (VBOW)****UPPER PIN (UPIN)****LOW PIN (LPIN)****P BOARD ADJUSTMENTS****PIP V. POSITION (PIPV), PIP H. POSITION (PIPH)**

1. Input a color bar signal.
2. Set to service adjustment mode.
3. Select PHOP with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best balanced position at four corner P in P display position.
5. Adjust P in P put at lower right position.
6. Write the memory by Pressing **[MUTING]** then **[ENTER]\*\***.

**\*\*WARNING:** Do NOT turn off the power or AC immediately after pressing **[MUTING]** then **[ENTER]**. Wait at least 10 seconds.

## 6-2. CIRCUIT BOARDS LOCATION



## 6-3. PRINTED WRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$  :  $\mu\text{F}$  50V or less are not indicated except for electrolytics and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- All resistors are in ohms.  
 $\text{K}\Omega=1000\Omega$ ,  $\text{M}\Omega=1000\text{k}\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm  
 Rating electrical power :  $\frac{1}{4}\text{W}$

- $\frac{1}{4}\text{W}$  in resistance,  $\frac{1}{10}\text{W}$  and  $\frac{1}{8}\text{W}$  in chip resistance.
- : nonflammable resistor.
- : fusible resistor.
- $\Delta$  : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.  
 Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved. (Refer to R530 and R531 adjustment on Page 15.)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced( )	Adjustment( )
IC351,IC501,D519,D520,D521 C531,C532,R387,R529,R530,R531, R532,R533,R550,T503.....A BOARD IC643,R661.....G BOARD	R530,R531

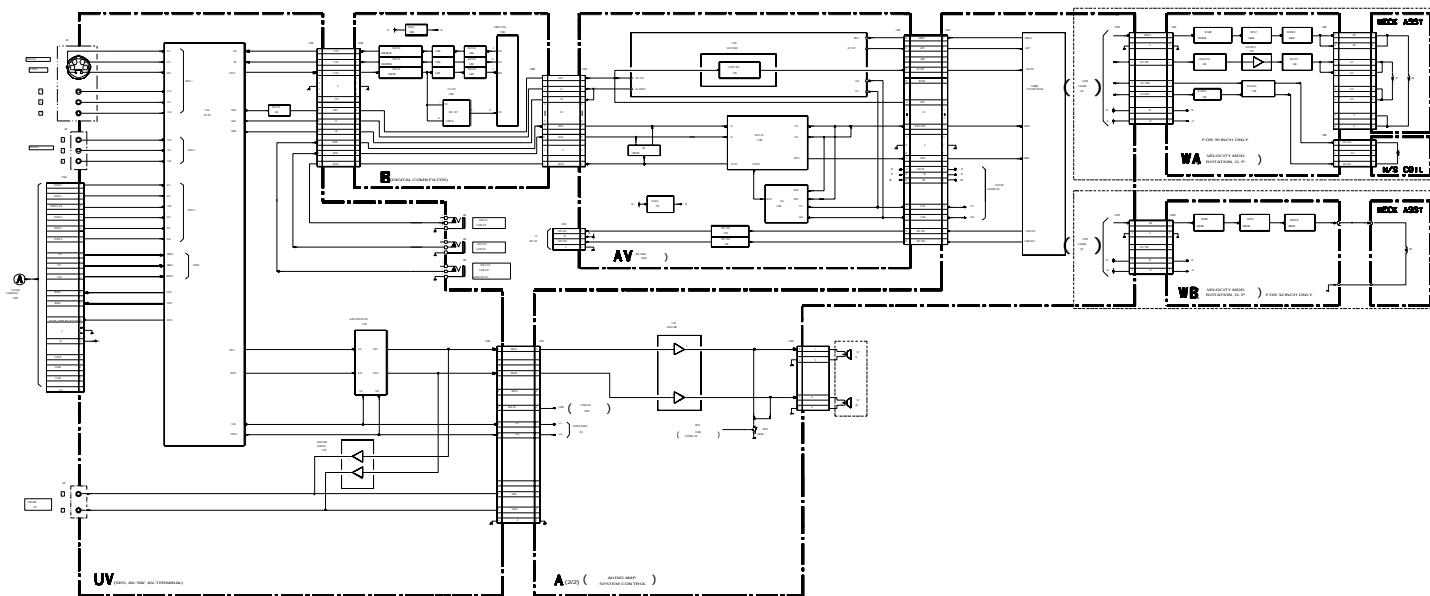
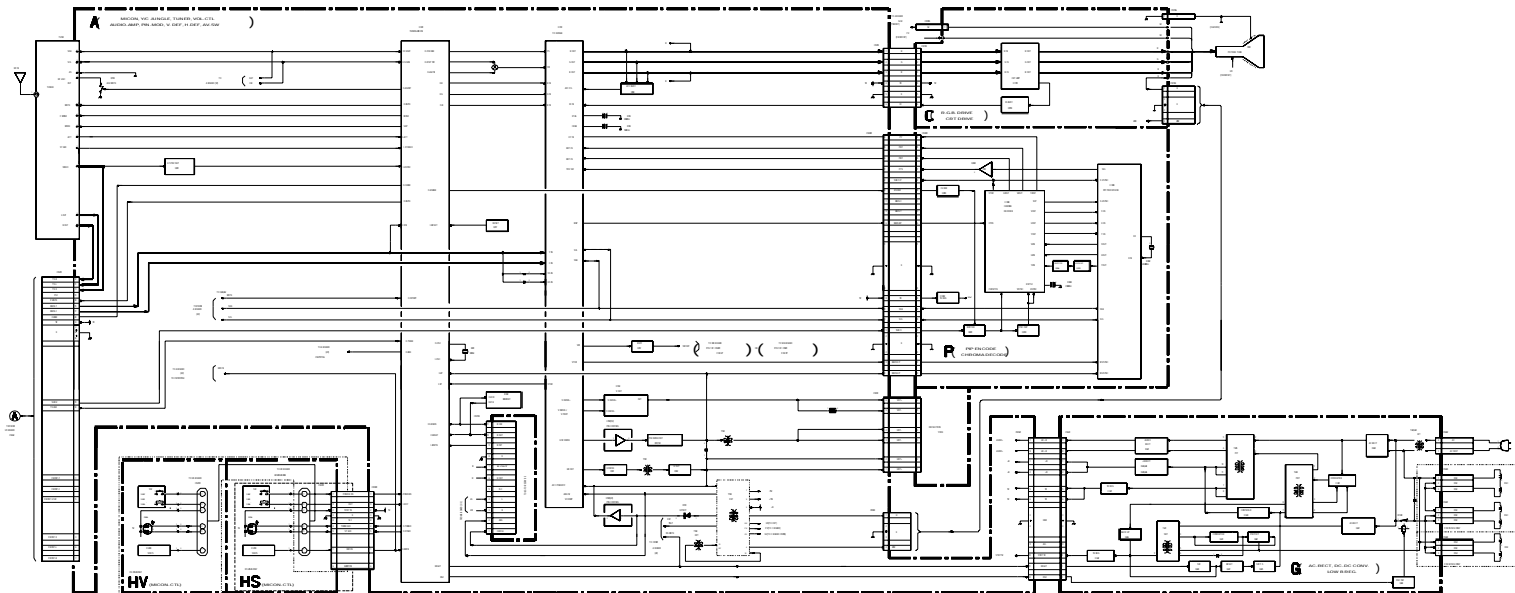
- Readings are taken with a color-bar signal input.
- Readings are taken with a  $10\text{M}\Omega$  digital multimeter.
- Voltages are DC with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- S : Measurement impossibility.
- : B+line.
- : B-line.  
 (Actual measured value may be different).
- : signal path. (RF)
- Circled numbers are waveform references.

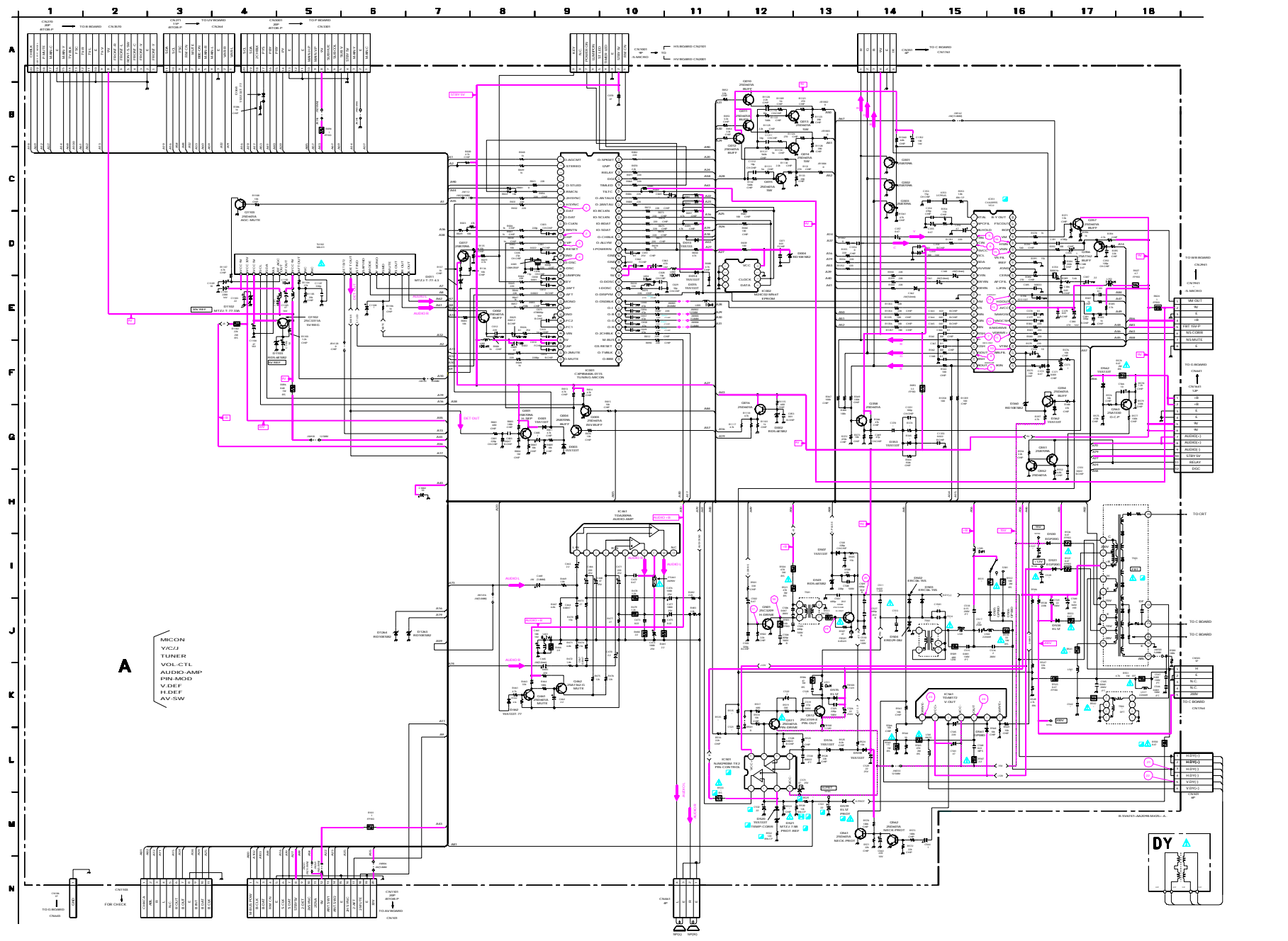
Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

The symbol display is on the component side.  
 The components identified by shading and mark are critical for safety. Replace only with part number specified.  
 The symbol indicate fast operating fuse.  
 Replace only with fuse of same rating as marked.

Les composants identifiés par un tramé et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.  
 Le symbole indique une fusible à action rapide. Doit être remplacée par une fusible de même valeur, comme marqué.







## A BOARD (\*) MARK LIST

REF.NO.	LOC.	KV-32S65	KV-35S65
C069	C-11	#	10MF
C370	G-14	0.022MF	0.047MF
C513	J-14	0.056MF	0.033MF
C514	J-15	0.62MF	0.82MF
C520	K-13	1000PF	0.0022MF
C521	L-12	0.0022MF	0.0033MF
C537	I-17	470MF	1000MF
C539	I-17	470MF	1000MF
C542	K-17	#	0.047MF
C1501	J-15	0.12MF	#
CN1941	F-18	5P	8P
L541	K-17	#	1-406-677-11
R069	C-11	#	10K
R085	C-11	#	10K
R365	G-14	150K	100K
R374	G-14	1.5M	1M
R511	I-16	68	100
R515	K-12	27K	15K
R523	L-13	10K	8.2K
R529	M-13	22K	18K
R531	M-13	68K	220K
R533	M-12	47K	33K
R535	K-11	150K	180K
R541	J-17	#	0.47
R542	K-18	#	22
R546	I-17	22K	18K
T502	J-15	1-424-545-11	1-429-408-11
T503	I-18	NX-2609	NX-3005
T504	K-18	#	1-413-059-00

#: NOT MOUNTED

# A BOARD

## LOCATOR LIST

DIODE	
D001	A6
D002	D4
D003	A6
D004	C3
D005	D1
D006	E2
D011	A5
D013	C5
D014	D4
D015	C4
D353	D7
D356	E3
D360	E7
D362	E8
D368	C8
D462	F1
D501	I3
D502	I9
D503	I9
D504	I8
D505	I6
D506	I6
D507	I3
D515	H5
D516	H3
D518	I3
D519	F9
D520	G3
D521	G3
D530	F10
D531	F11
D534	G9
D561	G8
D562	G3
D1102	B10
D1103	B12
D1247	E12
D1248	E12
D1263	D9
D1264	E10
IC	
IC001	B4
IC002	C3
IC003	E1
IC351	D5
IC461	F5
IC501	H3
IC561	G8
IC1261	D11
IC1401	E11
IC1402	E11

TRANSISTOR	
Q001	A6
Q002	C5
Q003	I2
Q004	I2
Q010	D4
Q011	D4
Q012	D4
Q013	E4
Q014	E4
Q015	D3
Q016	D3
Q017	A5
Q301	D8
Q302	C7
Q303	C7
Q354	E8
Q356	D4
Q357	E5
Q358	E8
Q461	G3
Q462	G4
Q501	J4
Q502	J9
Q511	H3
Q512	H4
Q551	I3
Q552	I3
Q561	F7
Q562	F7
Q563	H3
Q1102	B12
Q1103	A10
Q1231	E13
Q1232	E13
Q1261	C12
Q1262	C12
Q1263	B12

A BOARD IC VOLTAGE LIST

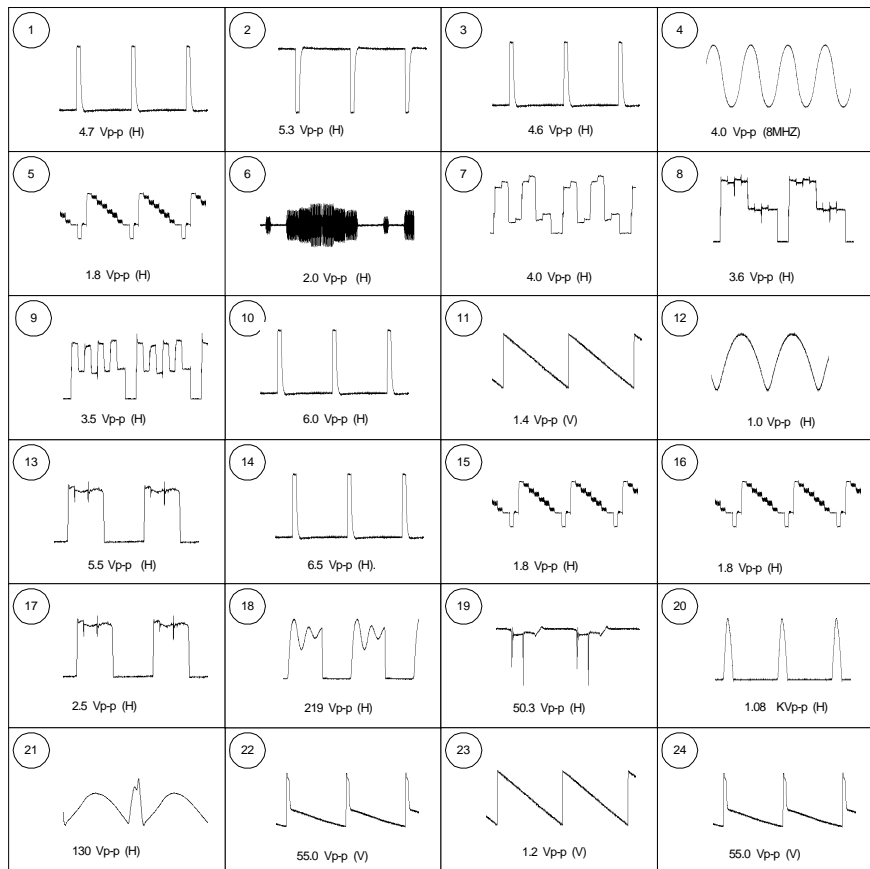
IC001		IC351		IC501	
pin	volt	pin	volt	pin	volt
1	0	1	2.0	1	3.3
2	4.7	2	5.3	2	7.6
3	NC	3	4.0	3	8.2
4	NC	4	0	4	-16.0
5	4.7	5	4.0	5	2.1
6	4.0	6	8.7	6	2.9
7	0.05	7	0	7	-15.8
8	0.04	8	4.7	8	11.8
9	NC	9	0.2	IC561	
10	NC	10	6.3	pin	volt
11	NC	11	6.0	1	1.4
12	4.7	12	5.9	2	11.8
13	3.8	13	GND	3	-13.9
14	1.1	14	0	4	-16.0
15	4.7	15	0	5	0.05
16	GND	16	5.0	6	12.8
17	2.2	17	0	7	1.5
18	2.2	18	5.0	All voltages are in V	
19	0	19	4.0		
20	4.7	20	2.1		
21	2.9	21	4.4		
22	2.6	22	1.9		
23	0	23	4.8		
24	0	24	1.8		
25	GND	25	3.4		
26	1.5	26	2.5		
27	2.4	27	8.6		
28	2.3	28	0.6		
29	4.7	29	2.9		
30	0.8	30	2.9		
31	0	31	3.7		
32	0	32	4.2		
33	NC	33	4.6		
34	NC	34	8.8		
35	NC	35	3.1		
36	0.2	36	3.3		
37	0	37	3.9		
38	0	38	4.1		
39	0	39	2.3		
40	0	40	GND		
41	0	41	2.6		
42	0	42	2.7		
43	0	43	3.9		
44	2.6	44	3.3		
45	2.7	45	5.9		
46	4.7	46	0.4		
47	4.7	47	NC		
48	GND	48	NC		
49	GND	IC461			
50	4.7	pin	volt		
51	0	1	1.3		
52	0	2	0.7		
53	4.7	3	12.4		
54	4.7	4	0.7		
55	4.7	5	1.3		
56	4.7	6	0		
57	4.7	7	NC		
58	0.06	8	11.3		
59	3.0	9	22.7		
60	3.4	10	11.3		
61	0	11	NC		
62	4.4				
63	NC				
64	4.5				

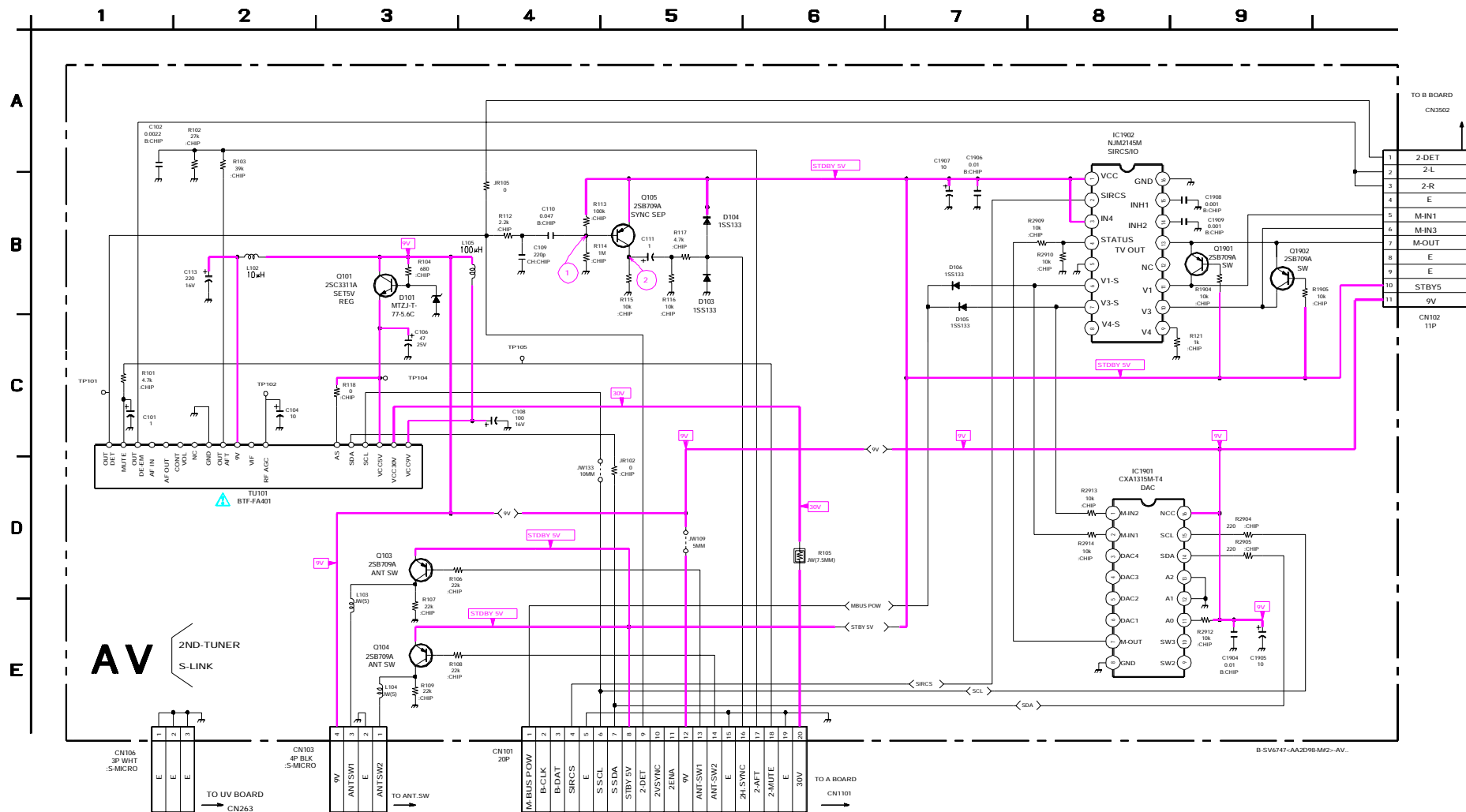
A BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q001	4.9	0.7	4.8
Q002	4.2	8.7	4.8
Q003	-0.4	3.8	GND
Q004	0.6	GND	3.8
Q010	0	8.7	0
Q011	0	8.7	0
Q012	0	8.7	0
Q013	-0.04	0	GND
Q014	-0.06	0	GND
Q015	0	0	GND
Q016	5.7	8.8	5.0
Q017	4.1	4.7	4.8
Q301	3.6	GND	1.6
Q302	3.6	GND	1.7
Q303	3.6	GND	1.8
Q354	0.4	GND	0.2
Q356	4.8	GND	5.4
Q357	3.6	8.7	2.9
Q358	1.6	8.7	1.7
Q461	0	22.6	0
Q462	22.6	0.7	22.7
Q501	-0.7	109	GND
Q502	-0.2	132.6	GND
Q511	-15.9	-12.3	-16.1
Q512	-16.4	-30.7	-16.1
Q551	2.8	0	2.8
Q552	0	2.8	GND
Q561	0	2.9	GND
Q562	-0.3	0	GND
Q563	135	0	135.4
Q1102	5.6	8.6	30
Q1103	0	6.9	GND

All voltages are in V

# • A BOARD WAVEFORMS





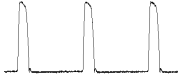
# • AV- BOARD WAVEFORMS

1



1.6 Vp-p (H)

2



4.6 Vp-p (H)

**AV BOARD TRANSISTOR  
VOLTAGE LIST**

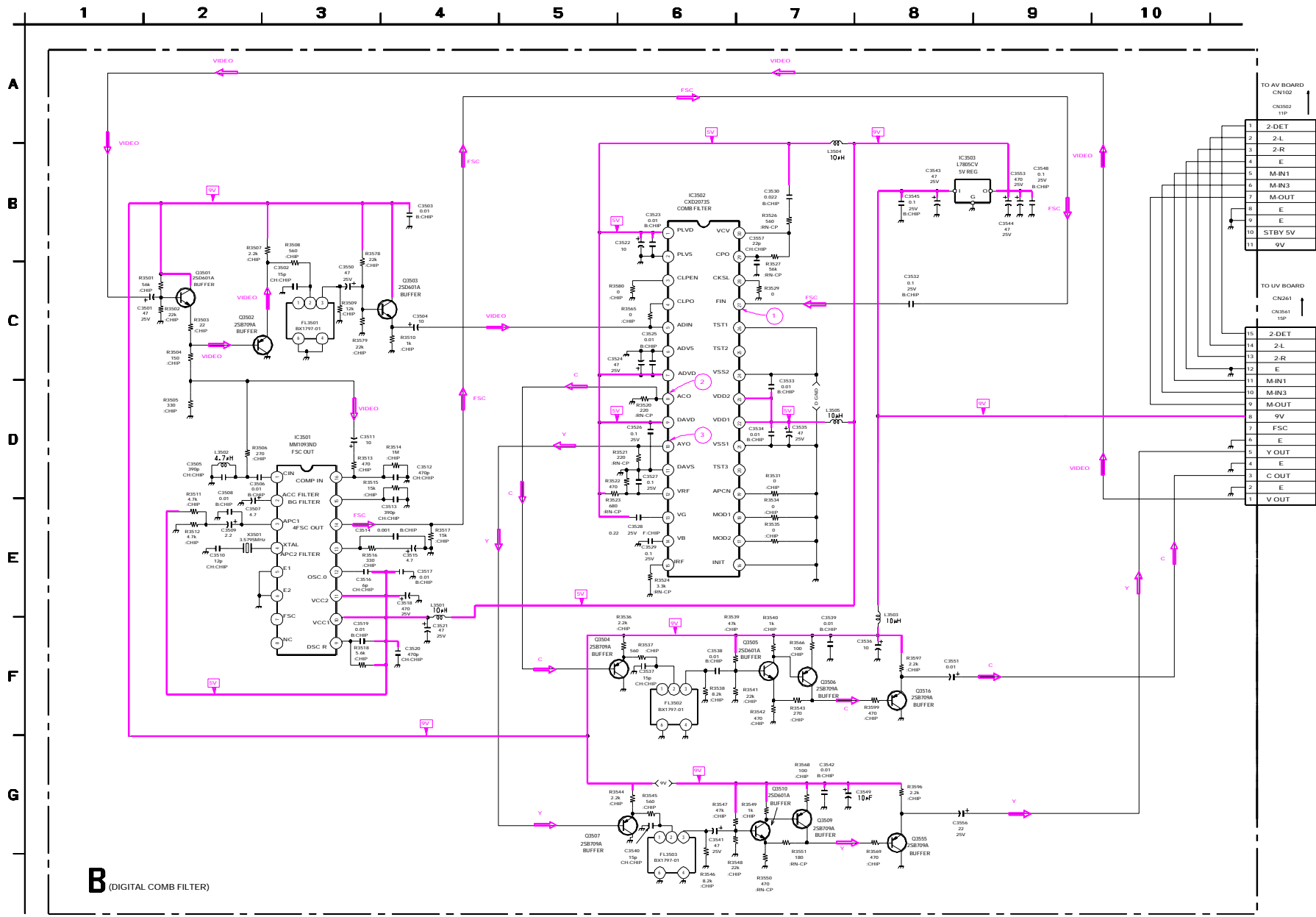
	B	C	E
Q101	4.6	8.6	4.0
Q103	4.2	4.7	4.9
Q104	5.0	0.0	4.9
Q105	5.1	0.80	4.9
Q860	0.68	0.2	0.0
Q862	0.70	0.05	0.0
Q864	2.9	4.9	2.4
Q1901	4.9	0.0	0.0
Q1902	-0.1	0.0	0.0
Q1905	5.2	0.80	4.9

All voltages are in V

**AV BOARD IC  
VOLTAGE LIST**

IC1902	
pin	volt
1	4.9
2	4.6
3	-0.1
4	0.0
5	GND
6	0.0
7	0.0
8	NC
9	0.0
10	0.0
11	0.0
12	NC
13	0.0
14	0.5
15	0.5
16	GND
IC1901	
pin	volt
1	0.0
2	0.0
3	NC
4	NC
5	NC
6	NC
7	0.4
8	GND
9	NC
10	NC
11	8.6
12	GND
13	GND
14	0.0
15	0.0
16	8.6

All voltages are in V



**B** (DIGITAL COMB FILTER)



## B BOARD IC VOLTAGE LIST

IC3501		IC3502		18	0
pin	volt	pin	volt	19	0
1	3.5	1	5.0	20	NC
2	0	2	GND	21	GND
3	0	3	0	22	5.0
4	0	4	1.5	23	5.0
5	GND	5	1.5	24	GND
6	GND	6	0.0	25	NC
7	NC	7	5.0	26	GND
8	NC	8	1.1	27	2.3
9	0	9	5.0	28	5.0
10	5.0	10	1.1	29	2.2
11	5.0	11	0	30	2.2
12	3.3	12	2.0	IC3503	
13	2.4	13	2.7	pin	volt
14	3.0	14	0.9	1	NC
15	0.7	15	2.0	2	8.8
16	0	16	GND	3	0
		17	0	4	GND
				6	GND

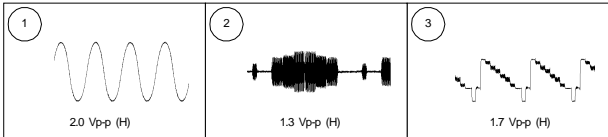
All voltages are in V

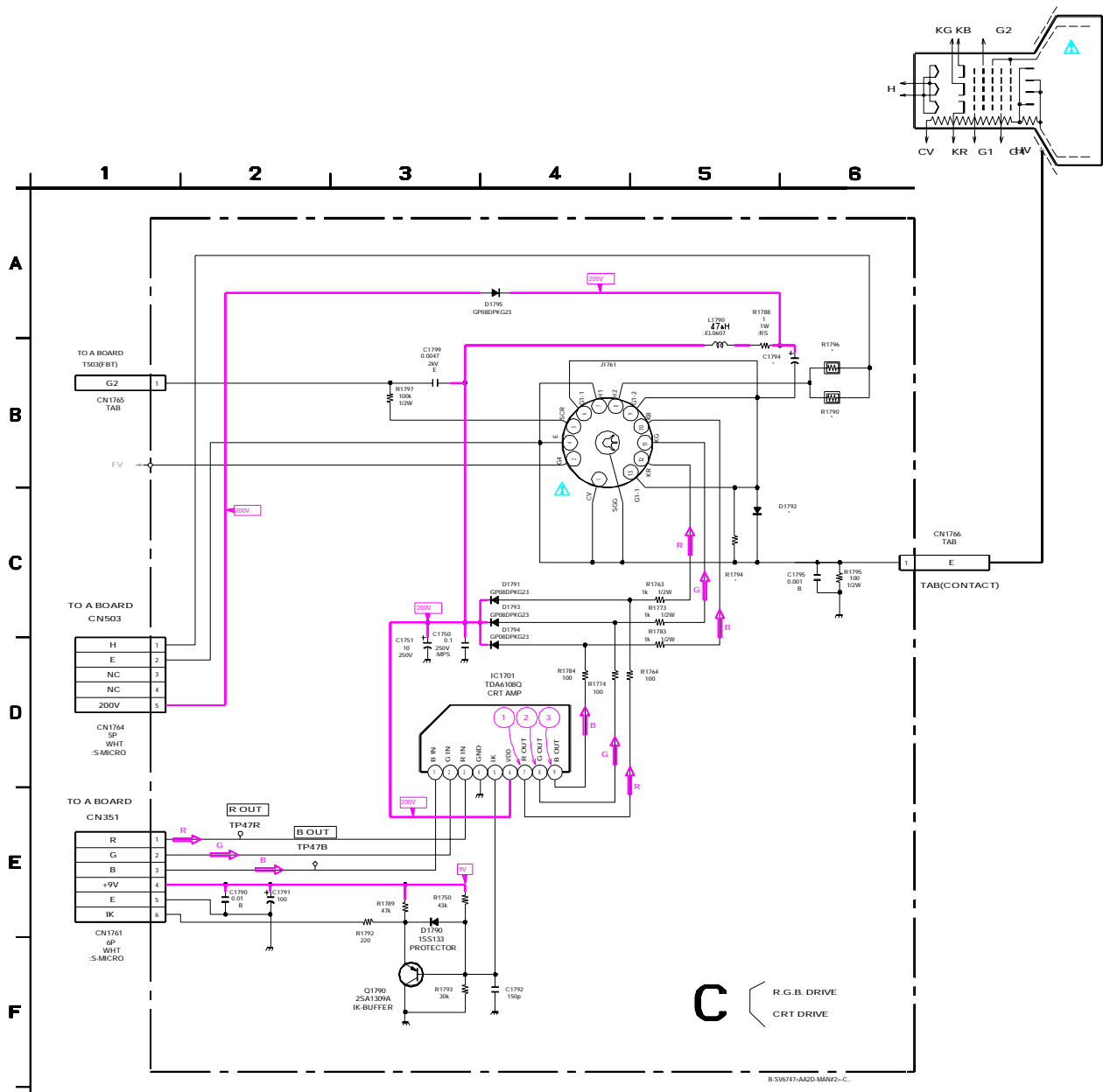
## B BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q3501	2.1	8.7	1.4
Q3502	1.4	GND	2.0
Q3503	4.2	8.8	3.5
Q3504	1.1	GND	1.7
Q3505	2.7	7.8	2.1
Q3506	7.8	3.0	8.4
Q3507	1.0	GND	1.7
Q3509	7.8	2.9	8.4
Q3510	2.7	7.8	2.1
Q3516	3.0	GND	3.7
Q3555	2.7	GND	3.4

All voltages are in V

## B BOARD WAVEFORMS



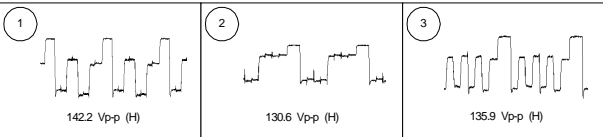


## C BOARD (\*) MARK LIST

REF. NO.	KV-35S65	KV-32S65
C1794	4.7	#
D1792	GPO8DPKG23	JW (15.0MM)
R1790	1	5.6
R1794	560K	JW (10.0MM)
R1796	1	5.6

#: NOT MOUNTED

# C BOARD WAVEFORMS



## C BOARD IC VOLTAGE LIST

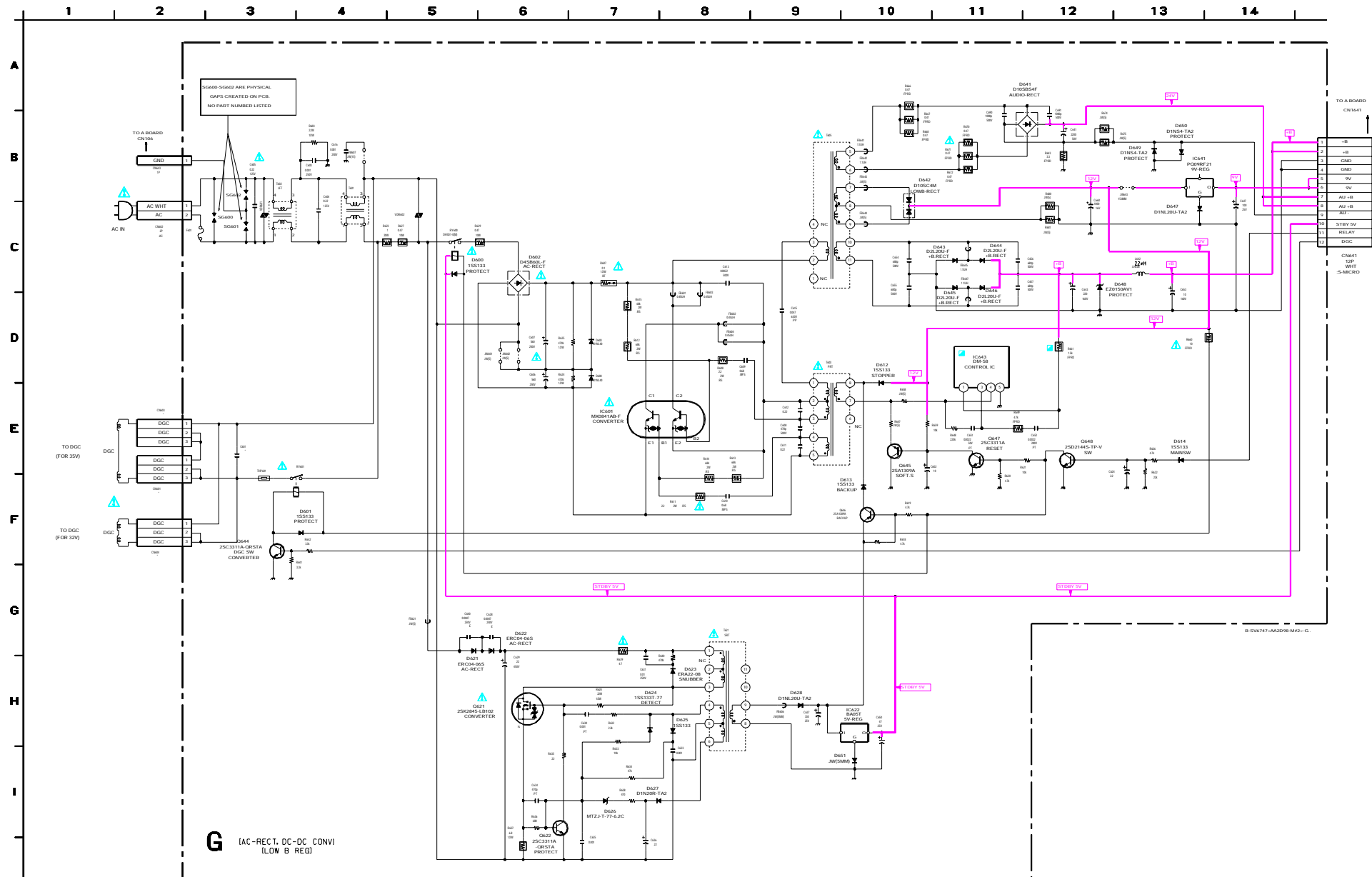
IC1701		
pin		volt
1		1.8
2		1.9
3		2.1
4		GND
5		5.5
6		203.1
7		136.7
8		146.2
9		1.1

All voltages are in V

## C BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q1790	5.4	GND	4.9

All voltages are in V



## G BOARD LOCATOR LIST

DIODE	
D600	D-3
D601	E-1
D602	H-3
D603	G-4
D604	H-4
D612	C-3
D613	D-2
D614	A-4
D621	F-3
D622	G-2
D623	F-2
D624	F-2
D625	F-2
D626	F-1
D627	F-2
D628	D-1
D631	D-2
D632	E-1
D641	B-3
D642	B-3
D643	B-4
D644	C-4
D645	B-4
D646	C-4
D647	D-2
D648	C-4
D649	A-2
D650	A-2
D651	D-1
IC	
IC601	G-4
IC622	D-1
IC641	B-2
IC643	C-2
TRANSISTOR	
Q621	F-2
Q622	G-2
Q644	E-1
Q645	D-2
Q646	C-1
Q647	D-2
Q648	A-3
TRANSFORMER	
T601	I-3
T602	J-5
T603	E-3
T605	C-3
T621	E-2

## G BOARD IC VOLTAGE LIST

IC601	
pin	volt
C1	151.4
C2	300.8
B2	149.0
B1	-1.75
E1	GND
E2	151.2
IC641	
pin	volt
IN	11.1
OUT	8.9
G	GND
IC643	
1	134
2	NC
3	2.4
4	8.5
5	GND

All voltages are in V

## G BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q622	0.5	1.75	GND
Q644	0	11.1	GND
Q645	11.1	GND	8.5
Q646	6.0	6.7	6.7
Q647	0	11.1	GND
Q648	0.7	0.04	GND

All voltages are in V

## G BOARD TRANSISTOR VOLTAGE LIST

	S	D	G
Q621	0	152.4	1.75

All voltages are in V



## G BOARD (\*) MARK LIST

REF. NO.	KV-35S65	KV-32S65
C601	0.22	#
CN601	3P	#
CN603	3P	#
CN604	#	3P

#: NOT MOUNTED

1

2

3

4

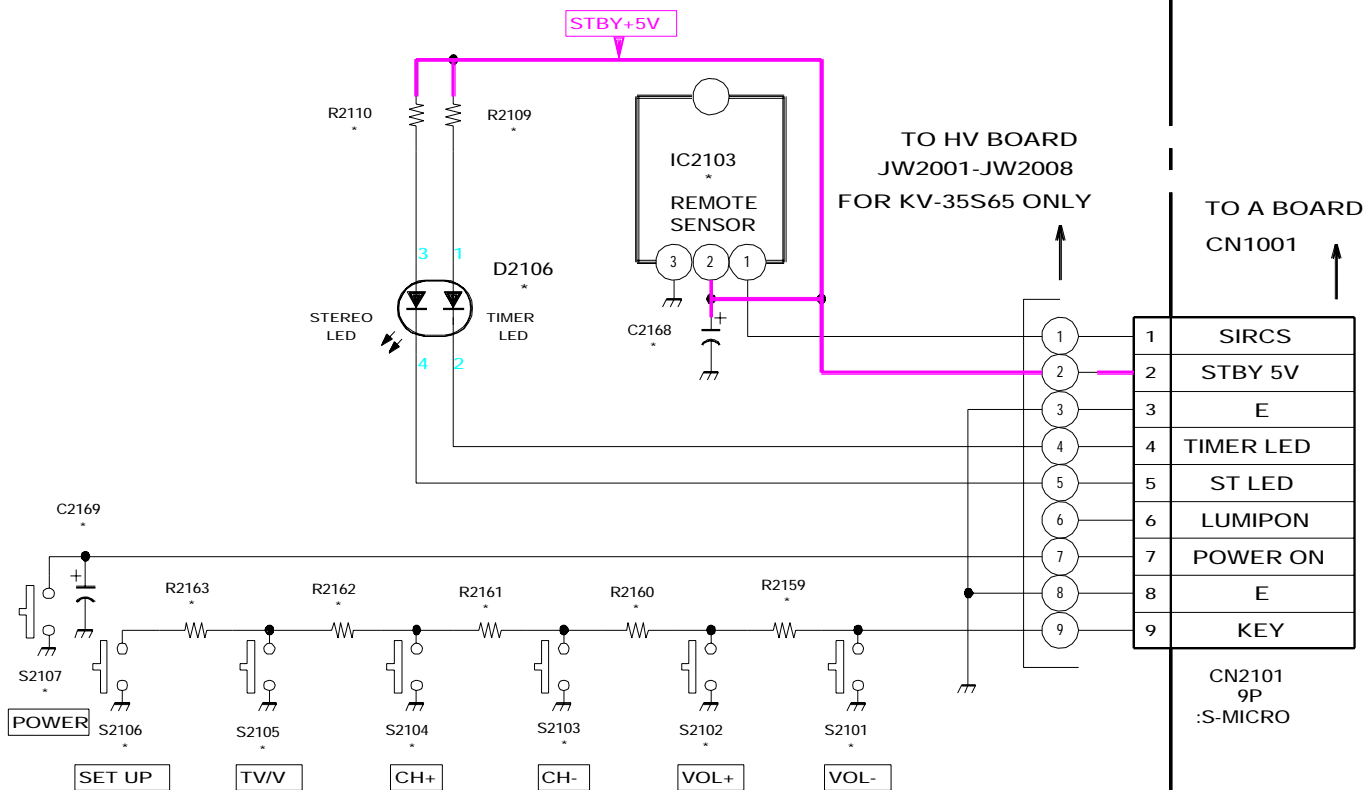
A

B

C

# HS

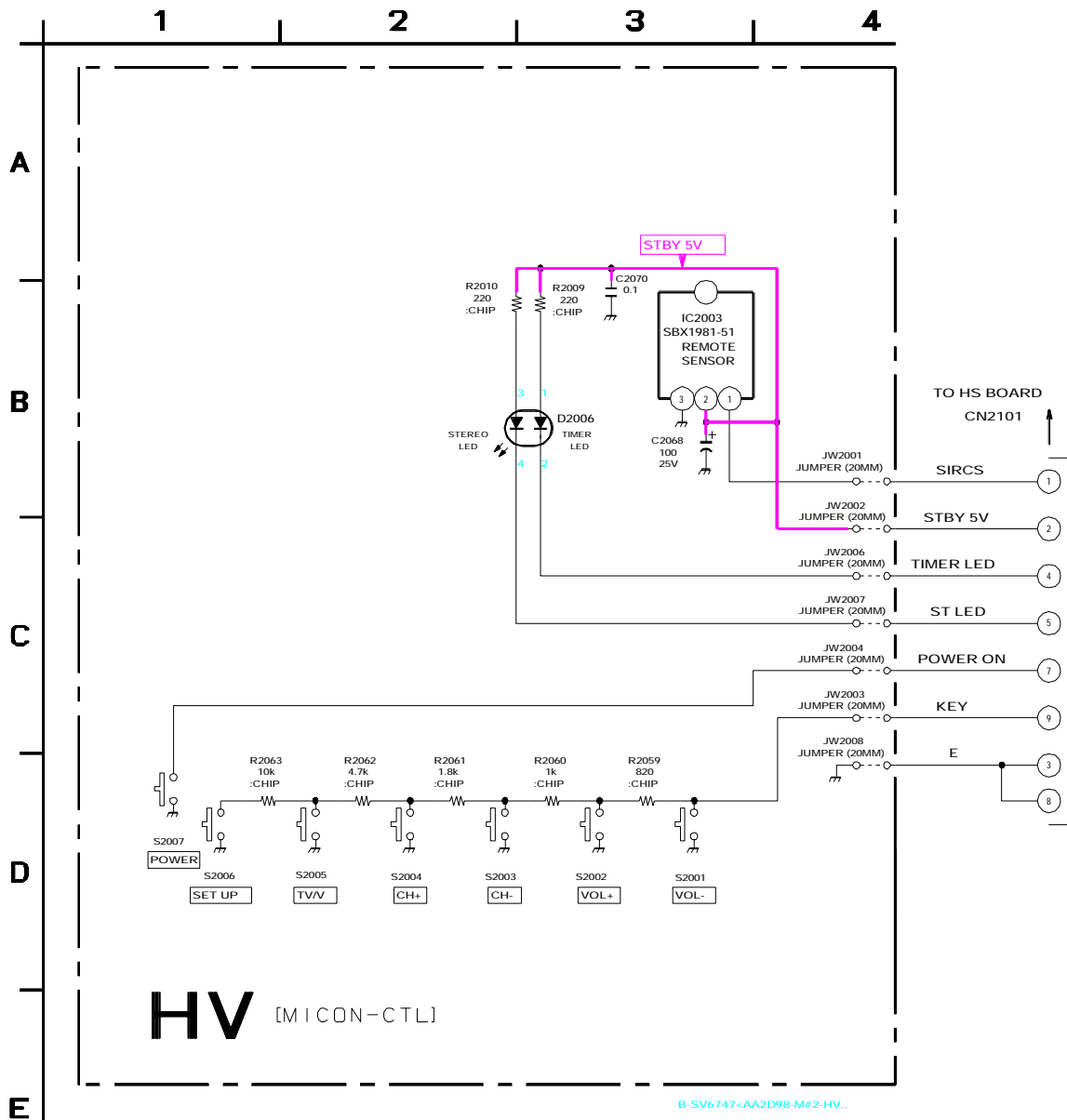
[MICON-CTL]

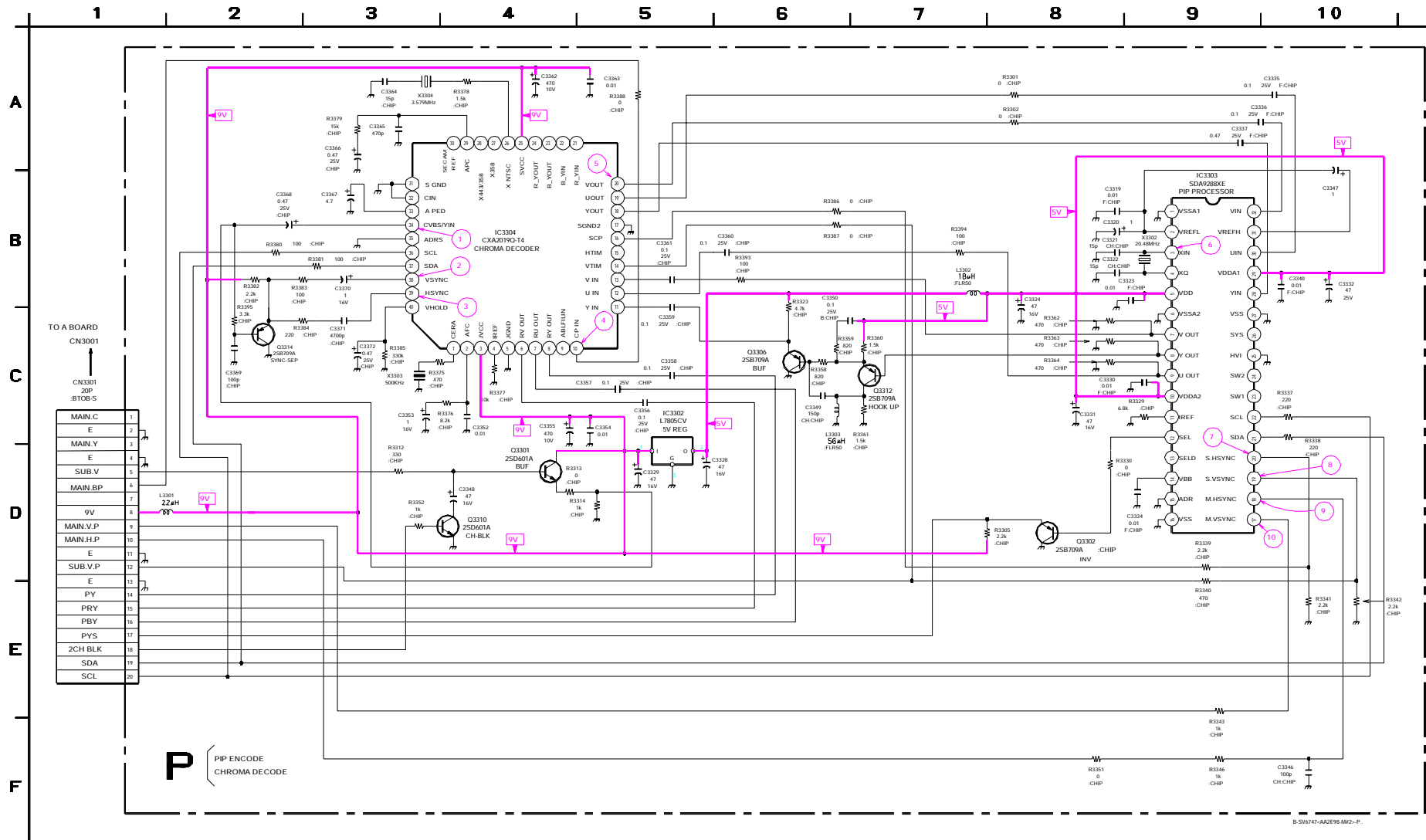


## HS BOARD (\*) MARK LIST

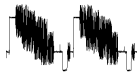
REF. NO.	LOC.	KV-35S65	KV-32S65
C2168	B-3	#	100MF
C2169	C-1	#	0.47MF
D2106	B-2	#	LED
IC2103	B-3	#	SBX1981-51
R2109	B-3	#	220
R2110	B-2	#	220
R2159	C-3	#	820
R2160	C-3	#	1K
R2161	C-2	#	1.8K
R2162	C-2	#	4.7K
R2163	C-2	#	10K
S2101	C-3	#	SWITCH, TACTILE
S2102	C-3	#	SWITCH, TACTILE
S2103	C-3	#	SWITCH, TACTILE
S2104	C-2	#	SWITCH, TACTILE
S2105	C-2	#	SWITCH, TACTILE
S2106	C-2	#	SWITCH, TACTILE
S2107	C-1	#	SWITCH, TACTILE

#: NOT MOUNTED





## • P BOARD WAVEFORMS



2.6 Vp-p (H)



2.1 Vp-p (8MHz)



2.3 Vp-p (H)



3.2 Vp-p (H)



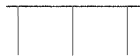
1.0 Vp-p (H)



3.9 Vp-p (V)



3.4 Vp-p (H)



4.0 Vp-p (V)



6.5 Vp-p (H)



6.2 Vp-p (V)

## P BOARD IC VOLTAGE LIST

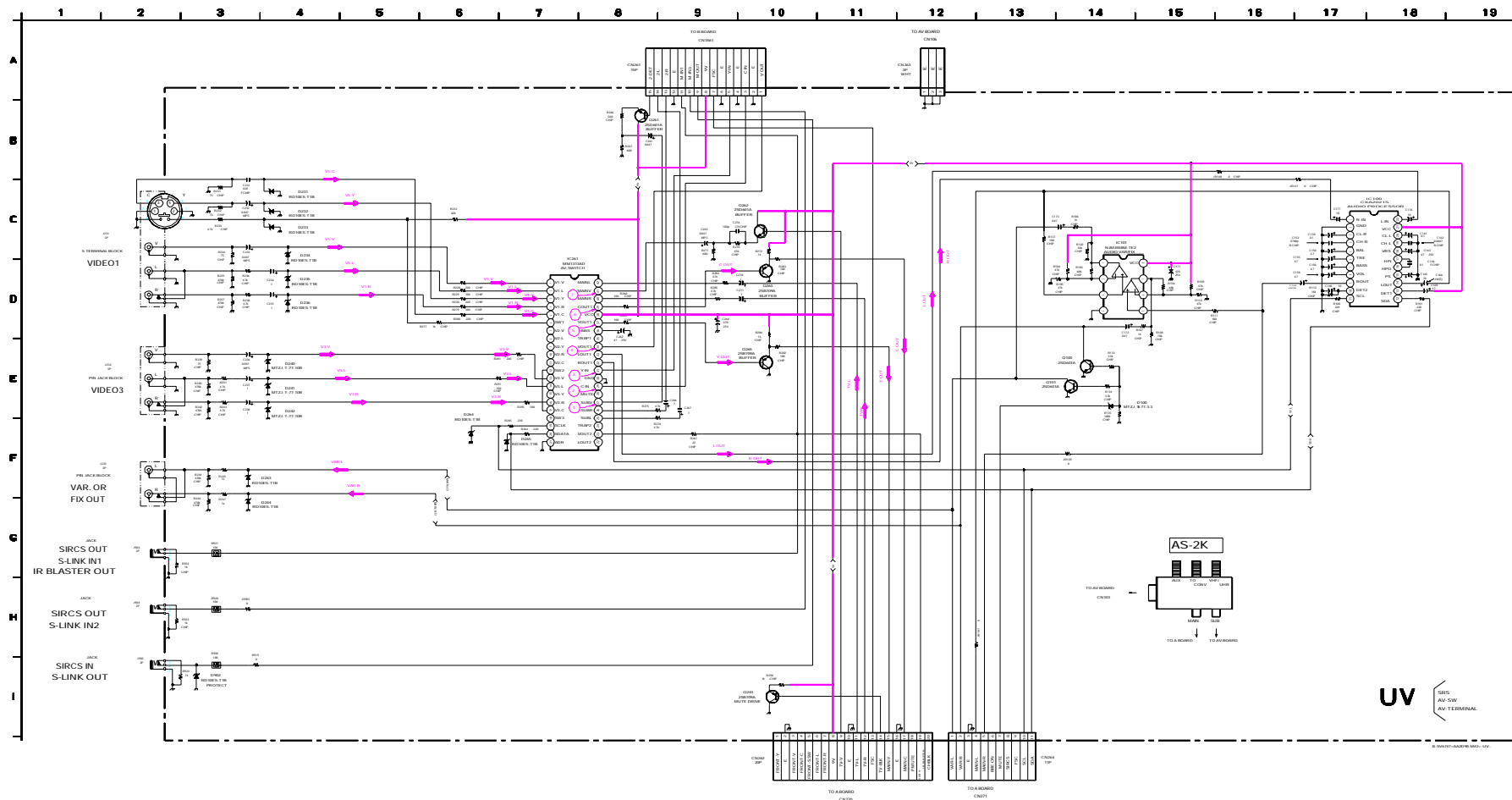
IC3302		IC3304	
pin	volt	pin	volt
1	8.6	1	2.2
2	4.9	2	3.9
3	GND	3	8.6
IC3303		4	1.7
pin	volt	5	GND
1	GND	6	2.8
2	2.9	7	2.8
3	2.4	8	2.8
4	2.4	9	NC
5	4.9	10	0.4
6	GND	11	3.8
7	0.4	12	4.1
8	0	13	4.2
9	0	14	0.1
10	0	15	NC
11	1.9	16	0.6
12	0	17	GND
13	NC	18	3.3
14	-2.9	19	2.8
15	GND	20	2.8
16	GND	21	NC
17	0.6	22	NC
18	0.3	23	NC
19	0.0	24	NC
20	0.5	25	8.6
21	4.7	26	2.3
22	4.8	27	NC
23	NC	28	NC
24	NC	29	4.9
25	GND	30	NC
26	NC	31	GND
27	GND	32	GND
28	2.1	33	4.0
29	4.9	34	4.7
30	2.2	35	GND
31	3.9	36	4.8
32	2.2	37	4.7
		38	3.7
		39	2.5
		40	2.6

All voltages are in V

## P BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q3301	5.1	8.6	4.5
Q3302	0	GND	0.6
Q3306	0.6	GND	1.3
Q3310	0	4.9	GND
Q3312	0.2	0	0.7
Q3314	4.5	GND	5.1

All voltages are in V





# UV BOARD WAVEFORMS



1.0 Vp-p (H)



2.0 Vp-p (H)



2.0 Vp-p (H)



1.8 Vp-p (H)



1.8 Vp-p (H)



2.0 Vp-p (H)



1.0 Vp-p (H)

## UV BOARD LOCATOR LIST

CONNECTOR		IC	
CN261	A-5	IC100	A-7
CN262	F-8	IC101	C-8
CN263	A-3	IC102	B-7
CN264	F-2	IC103	D-7
CN265	A-7	IC261	C-4
DIODE		TRANSISTOR	
D100	B-8	Q100	B-8
D231	B-5	Q101	B-8
D232	B-5	Q231	D-3
D233	B-5	Q232	C-2
D234	B-5	Q233	E-3
D235	B-5	Q234	D-3
D236	B-5	Q235	C-2
D237	E-3	Q236	C-3
D238	E-3	Q237	C-3
D239	E-3	Q238	C-3
D240	C-5	Q239	C-3
D241	C-5	Q240	B-2
D242	C-5	Q241	B-3
D243	F-3	Q242	A-3
D244	F-3	Q243	F-5
D245	E-3	Q261	A-4
D246	E-2	Q262	A-4
D264	F-1	Q263	B-3
D265	F-1	Q265	B-4
D902	B-1		

## UV BOARD TRANSISTOR VOLTAGE LIST

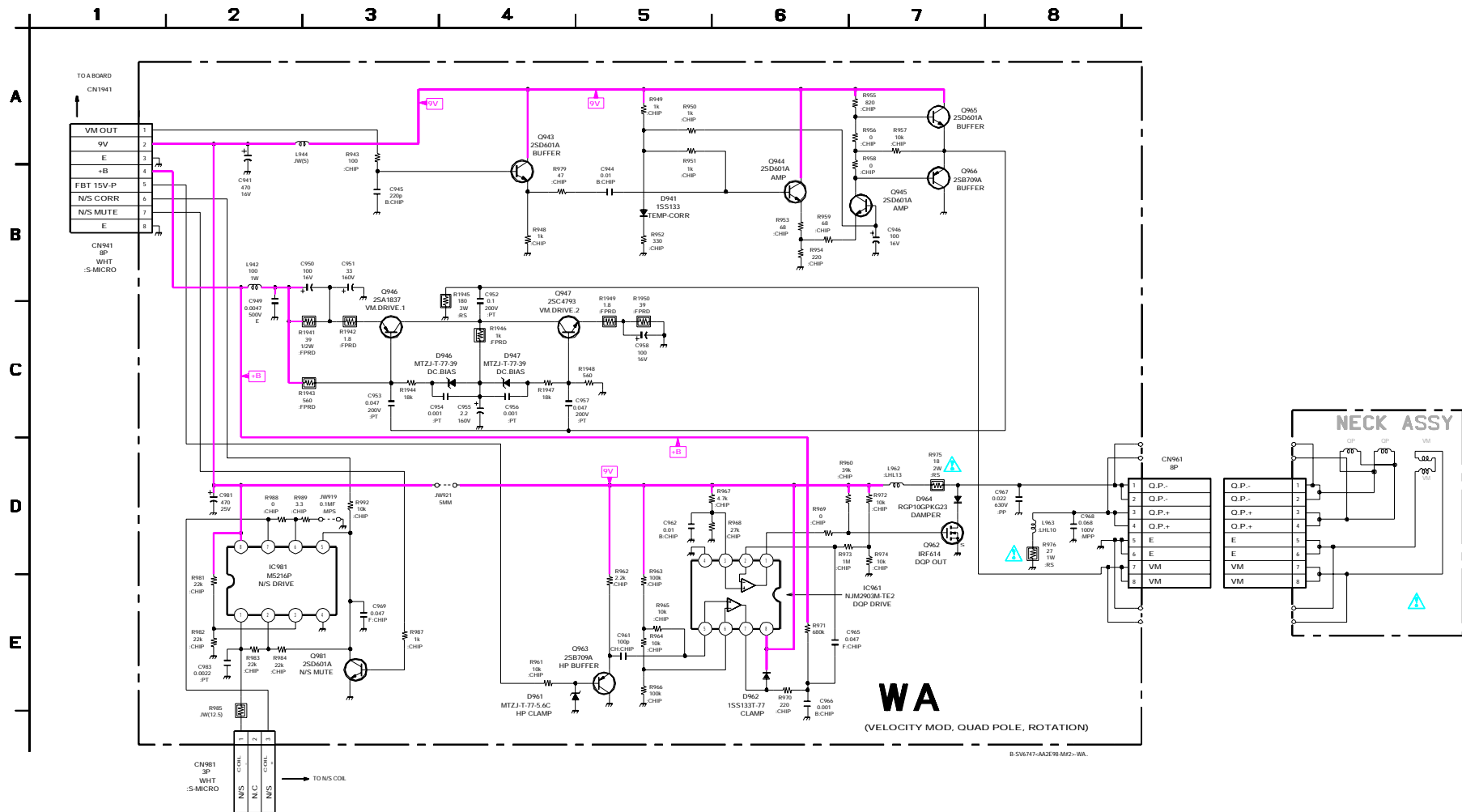
	B	C	E
Q100	0.2	0	GND
Q101	0.2	0	GND
Q243	0	GND	0.7
Q262	5.1	8.7	4.3
Q263	3.3	GND	3.9
Q265	4.2	GND	4.9

All voltages are in V

## UV BOARD IC VOLTAGE LIST

IC100		4	4.0
pin	volt	5	4.7
1	4.3	6	0.5
2	0	7	4.7
3	4.3	8	4.0
4	4.3	9	4.7
5	4.3	10	4.0
6	4.3	11	4.7
7	4.3	12	4.6
8	3.2	13	4.7
9	4.3	14	4.0
10	1.5	15	0
11	4.7	16	4.0
12	4.7	17	4.6
13	5.6	18	NC
14	4.3	19	4.7
15	4.3	20	4.7
16	4.3	21	GND
17	4.3	22	4.0
18	4.3	23	5.3
19	4.3	24	NC
20	4.3	25	4.0
21	8.7	26	4.0
22	4.3	27	5.3
IC101		28	NC
pin	volt	29	4.7
1	4.2	30	GND
2	4.3	31	5.7
3	4.3	32	4.0
4	0	33	4.0
5	4.3	34	5.0
6	4.3	35	NC
7	4.2	36	4.1
8	8.7	37	4.1
IC261		38	8.7
pin	volt	39	3.3
1	4.7	40	4.0
2	4.0	41	5.1
3	5.1	42	4.0

All voltages are in V



## WA BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q943	2.9	8.7	2.3
Q944	2.6	8.7	2.0
Q945	2.6	5.6	2.0
Q946	133.7	67.2	134.2
Q947	0.9	67.3	0.4
Q963	4.5	GND	5.1
Q965	5.6	8.7	5.6
Q966	5.6	GND	5.6
Q981	0.0	3.7	GND

All voltages are in V

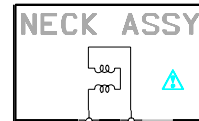
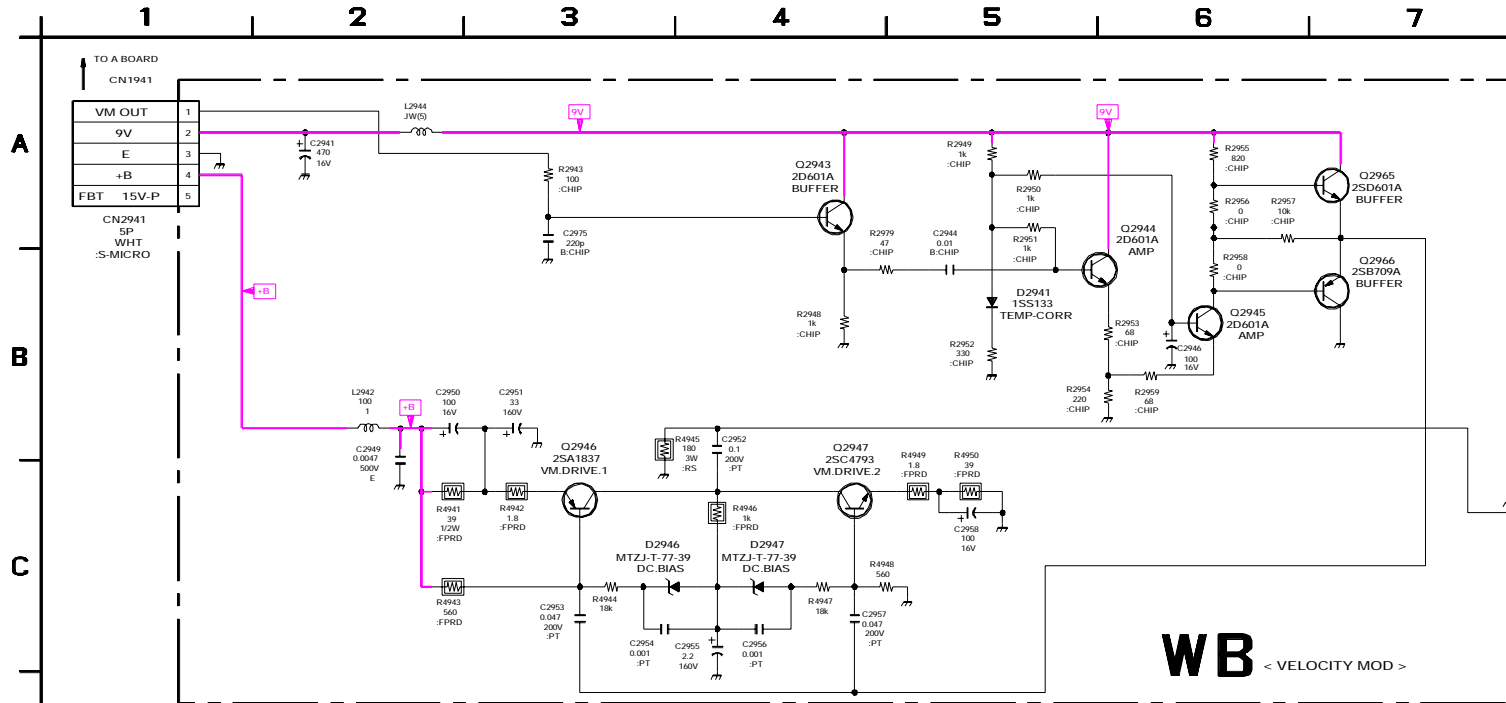
	D	G	S
Q962	11.2	3.7	GND

All voltages are in V

## WA BOARD IC VOLTAGE LIST

IC961		
pin		volt
1		3.7
2		4.0
3		7.5
4		GND
5		4.6
6		4.2
7		4.6
8		8.7
IC981		
pin		volt
1		5.0
2		4.2
3		4.4
4		GND
5		3.7
6		3.7
7		3.7
8		8.7

All voltages are in V



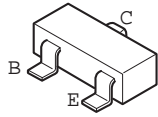
# WB BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q2943	3.0	8.9	2.4
Q2944	2.6	8.9	2.0
Q2945	2.7	5.7	2.0
Q2946	133.5	67.5	134.1
Q2947	0.9	67.5	0.4
Q2965	5.7	8.9	5.7
Q2966	5.7	GND	5.7

All voltages are in V

## 6-4. SEMICONDUCTORS

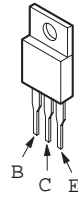
DTC114EK  
2SC1623-L5L6  
2SA1330-06  
2SA1162-G  
2SD601A-Q



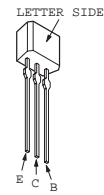
2SC3209LK



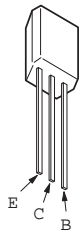
2SA1837  
2SC4159-E



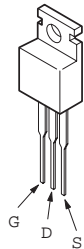
2SA1175-HFE  
2SC2785-HFE



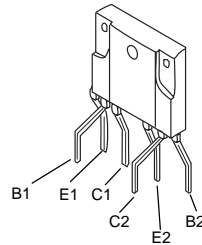
2SD2144S-V



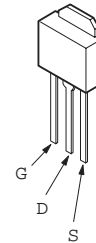
IRF614



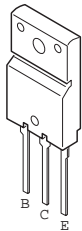
MX0841



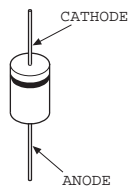
2SK2845-LB102



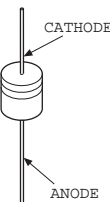
2SC5148



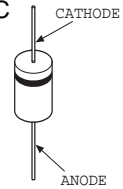
ERC06-15S  
ISSI33T-77



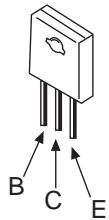
D1NS4  
D1N20R  
MTZJ-3.3  
MTZJ-33A  
RD10ESB2  
RD39ES-B2  
RD5.6ESB2  
RD6.2ESB2



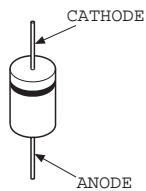
D2L20U  
EL1Z  
EZD150AV1  
GP08D  
MTZJ-T-77-4.3C  
EGP20G



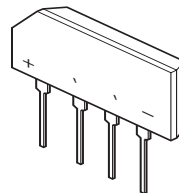
2SC4834M



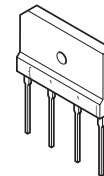
EGP30D  
ERD29-08J



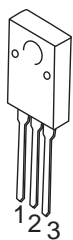
D10SBS4F



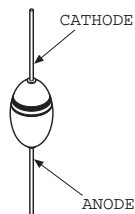
D4SB60L  
D1NL40-TA2



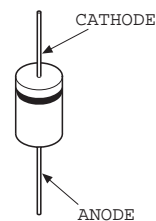
D10SC4M



U05G



D1NL20U



## SECTION 7 EXPLODED VIEW

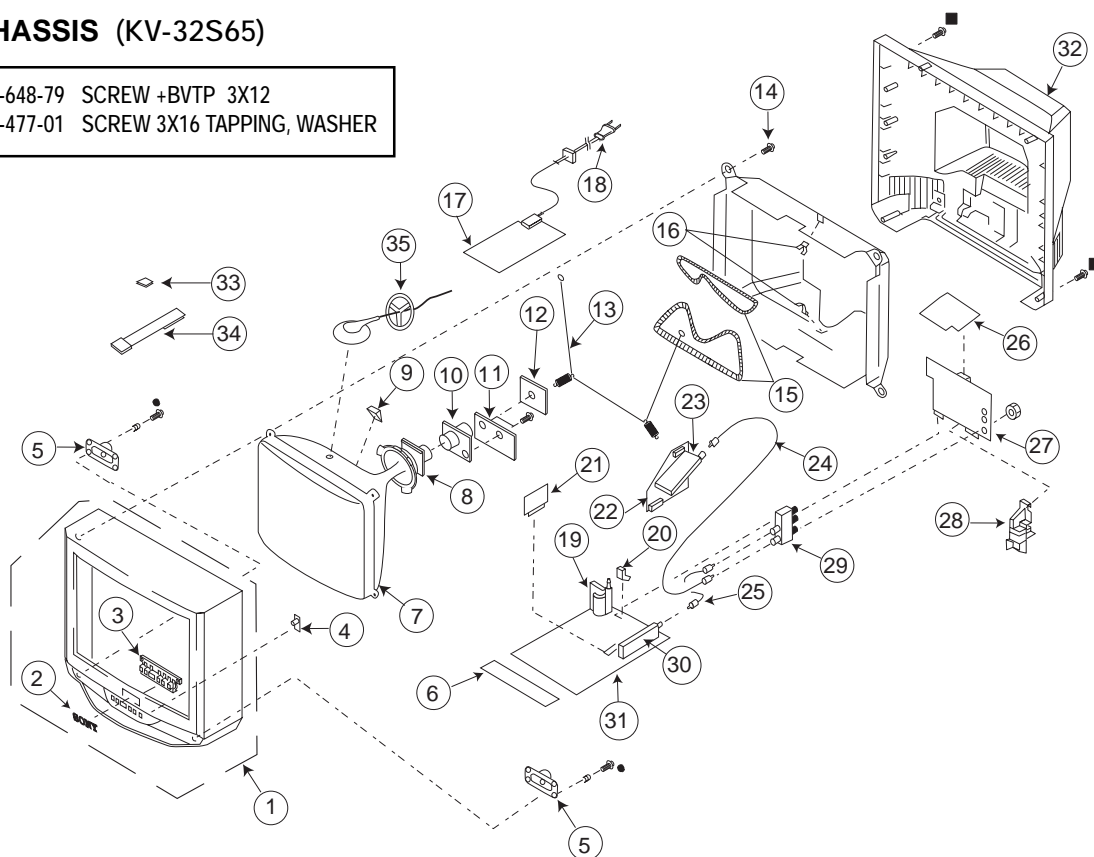
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The component parts of an assembly are indicated by the reference numbers in the remarks column.
- Items marked with an asterisk "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and "Δ" are critical for safety. Replace only with specified part number.

Les composants identifiés par un trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### 7-1. CHASSIS (KV-32S65)

- 7-685-648-79 SCREW +BVTP 3X12  
● 4-388-477-01 SCREW 3X16 TAPPING, WASHER



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4035-773-2	BEZNET ASSY	2-3	21	* A-1195-138-A	P BOARD, COMPLETE	
2	4-046-160-11	EMBLEM (NO.9), SONY		22	* A-1298-612-A	AV BOARD, COMPLETE	
3	4-063-573-01	BUTTON, MULTI		23	Δ 8-598-430-00	TUNER, FSS BTF-FA401	
4	4-063-570-01	GUIDE, LED		24	* 1-556-945-21	CABLE, P-P	
5	1-504-531-11	SPEAKER (13.1X6.2CM)		25	* 1-557-056-31	CABLE, P-P	
6	* A-1372-519-A	HS BOARD, COMPLETE		26	* A-1135-949-A	B BOARD, COMPLETE	
7	Δ 8-733-757-05	CRT 34FX2T		27	* A-1394-910-A	UV BOARD, COMPLETE	
8	Δ 8-451-482-11	DY Y34FXA2-V		28	* 4-052-905-01	V5/6 BRACKET	
9	4-053-005-01	SPACER, DY		29	8-598-414-00	ANTENNA SWITCH	
10	Δ 1-452-579-21	NECK ASSY		30	Δ 8-598-431-00	TUNER, FSS BTF-WA411	
11	* A-1372-508-A	WB BOARD, MOUNTED		31	* A-1298-667-A	A BOARD, COMPLETE	
12	* A-1331-837-A	C BOARD, MOUNTED		32	4-064-760-11	COVER, REAR	
13	4-036-329-01	SPRING (B), TENSION		33	1-452-885-11	MAGNET, LANDING	
14	4-041-268-01	SCREW (7), TAPPING		34	4-062-047-01	PIECE A(110), CONV. CORRECTION	
15	Δ 1-402-952-11	COIL, DEMAGNETIZATION		35	3-704-372-31	HOLDER, HV	
16	* 4-371-629-01	STOPPER WIRE					
17	* A-1316-389-A	G BOARD, COMPLETE					
18	Δ 1-751-059-11	POWER CORD W/CONNECTOR					
19	Δ 1-453-207-11	TRANSFORMER, FBT ASSY NX-2609//X4C					
20	4-064-530-01	CLIP, CHASSIS					

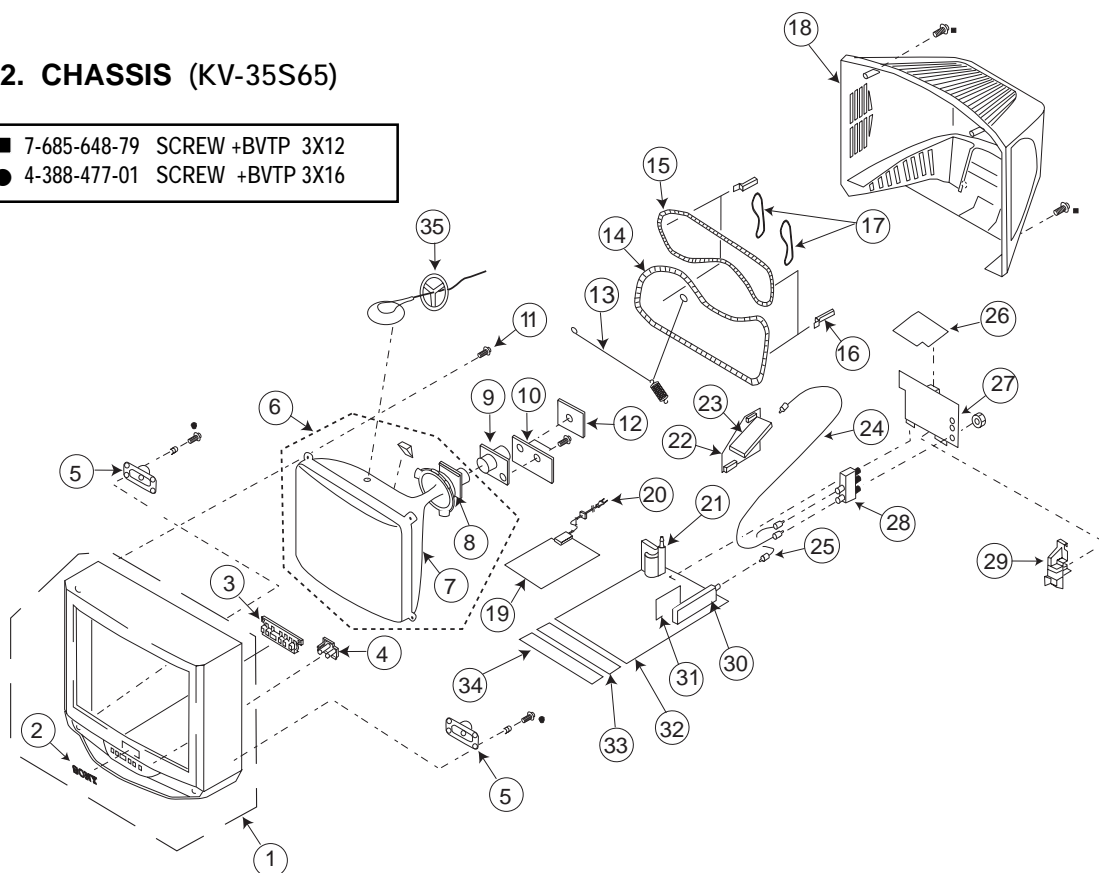


The components identified by shading and "Δ" mark are critical for safety. Replace only with specified part number.

Les composants identifiés par un trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## 7-2. CHASSIS (KV-35S65)

- 7-685-648-79 SCREW +BVTP 3X12
- 4-388-477-01 SCREW +BVTP 3X16



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4035-598-1	BEZNET ASSY	2	21	Δ X-4034-797-1	TRANSFORMER, FBT ASSY NX-3005//J1C	
2	4-046-160-11	EMBLEM (NO. 9), SONY		22	* A-1298-612-A	AV BOARD, COMPLETE	
3	4-058-053-11	BUTTON, MULTI		23	Δ 8-598-430-00	TUNER, FSS BTF-FA401	
4	4-058-054-01	BAR, OPTICAL		24	* 1-556-945-21	CABLE, P-P	
5	1-504-531-11	SPEAKER (13.1X6.2CM)		25	* 1-557-056-31	CABLE, P-P	
6	Δ 8-733-761-61	ITC 37GXT-A1	7-8	26	* A-1135-949-A	B BOARD, COMPLETE	
7	Δ 8-733-761-05	CRT 37GXT		27	* A-1394-910-A	UV BOARD, COMPLETE	
8	Δ 8-451-480-11	DY Y37GXA-X		28	8-598-414-00	ANTENNA SWITCH	
9	Δ 8-453-007-11	NA324-M		29	* 4-052-905-01	V5/6 BRACKET	
10	* A-1372-462-A	WA BOARD,MOUNTED		30	Δ 8-598-431-00	TUNER, FSS BTF-WA411	
11	4-046-765-01	SCREW, (7) TAPPING		31	* A-1195-138-A	P BOARD, COMPLETE	
12	* A-1331-843-A	C BOARD, MOUNTED		32	* A-1298-666-A	A BOARD, COMPLETE	
13	4-036-329-01	SPRING (B), TENSION		33	* A-1372-523-A	HV BOARD, COMPLETE	
14	Δ 1-411-881-11	COIL, DEMAGNETIC		34	* A-1372-507-A	HS BOARD, COMPLETE	
15	Δ 1-411-882-11	COIL, DEMAGNETIC		35	3-704-372-31	HOLDER, HV	
16	* 4-052-900-02	HOLDER, DGC					
17	4-059-585-01	TIE, CABLE					
18	4-058-052-31	COVER, REAR					
19	* A-1316-399-A	G BOARD, COMPLETE					
20	Δ 1-751-059-11	CORD, POWER W/CONNECTOR					

## SECTION 8 ELECTRICAL PARTS LIST

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## SECTION 8

### ELECTRICAL PARTS LIST

**Note:**

The components identified by shading and mark **Δ** are critical for safety. Replace only with part number specified.

**Note:**

Les composants identifiés par un trame et une marque **Δ** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by **Δ** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

**RESISTORS**

- All resistors are in ohms
- F : nonflammable

**CAPACITORS**

- MF =  $\mu$ F

**INDUCTORS**

- UH =  $\mu$ H, MMH = mH

When indicating parts by reference number, please include the board name.

REF.NO.	PART NO.	DESCRIPTION	REMARK		
<div>A</div>					
	* A-1298-667-A A BOARD, COMPLETE (KV-32S65 only)				
	* A-1298-666-A A BOARD, COMPLETE (KV-35S65 only)				
	4-382-854-11	SCREW (M3X10), P, S (+)			
	<u>CAPACITOR</u>				
C001	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C003	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C005	1-126-960-11	ELECT	1MF	20%	50V
C009	1-126-967-11	ELECT	47MF	20%	50V
C010	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C012	1-216-033-00	RES, CHIP	220	5%	1/10W
C013	1-216-121-91	RES, CHIP	1M	5%	1/10W
C014	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C023	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C028	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C029	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C030	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C035	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C036	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C037	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C038	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C039	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C040	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C051	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C053	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C056	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C061	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C062	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C063	1-126-935-11	ELECT	470MF	20%	16V
C069	VARIANT (SEE VARIANT PARTS LIST ON P. 64)				
C070	1-126-967-11	ELECT	47MF	20%	50V
C071	1-164-096-11	CERAMIC CHIP	0.01MF		50V
C072	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C075	1-107-823-11	CERAMIC CHIP	0.47MF	10%	16V
C353	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C354	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C355	1-126-959-11	ELECT	0.47MF	20%	50V
C356	1-126-963-11	ELECT	4.7MF	20%	50V
C357	1-126-959-11	ELECT	0.47MF	20%	50V
C358	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C359	1-126-933-11	ELECT	100MF	20%	16V
C363	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C364	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C365	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C366	1-130-495-00	FILM	0.1MF	5%	50V
C367	1-130-495-00	FILM	0.1MF	5%	50V
C368	1-130-495-00	FILM	0.1MF	5%	50V
C369	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C370	VARIANT (SEE VARIANT PARTS LIST ON P. 64)				
C371	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C372	1-126-959-11	ELECT	0.47MF	20%	50V
C373	1-126-960-11	ELECT	1MF	20%	50V
C376	1-126-964-11	ELECT	10MF	20%	50V
C377	1-130-495-00	FILM	0.1MF	5%	50V
C378	1-130-495-00	FILM	0.1MF	5%	50V
C379	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C380	1-126-935-11	ELECT	470MF	20%	16V
C381	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C383	1-130-495-00	FILM	0.1MF	5%	50V
C385	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C386	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C387	1-126-961-11	ELECT	2.2MF	20%	50V
C388	1-126-959-11	ELECT	0.47MF	20%	50V
C390	1-126-960-11	ELECT	1MF	20%	50V
C391	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C392	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C461	1-126-933-11	ELECT	100MF	20%	16V
C462	1-126-961-11	ELECT	2.2MF	20%	50V
C463	1-126-961-11	ELECT	2.2MF	20%	50V
C464	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C466	1-104-666-11	ELECT	220MF	20%	25V

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

**COMMON PARTS LIST**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C467	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V	C563	1-126-934-11	ELECT 220MF 20% 10V	
C468	1-104-664-11	ELECT	47MF 20% 25V	C564	1-126-960-11	ELECT 1MF 20% 50V	
C470	1-126-961-11	ELECT	2.2MF 20% 50V	C565	1-126-969-11	ELECT 220MF 20% 50V	
C471	1-104-666-11	ELECT	220MF 20% 25V	C566	1-126-964-11	ELECT 10MF 20% 50V	
C472	1-136-173-00	FILM	0.47MF 5% 50V	C568	1-136-169-00	FILM 0.22MF 5% 50V	
C473	1-136-169-00	FILM	0.22MF 5% 50V	C571	1-104-664-11	ELECT 47MF 20% 25V	
C474	1-126-942-61	ELECT	1000MF 20% 25V	C1002	1-126-964-11	ELECT 10MF 20% 50V	
C475	1-136-169-00	FILM	0.22MF 5% 50V	C1101	1-126-768-11	ELECT 2200MF 20% 16V	
C476	1-126-942-61	ELECT	1000MF 20% 25V	C1103	1-126-965-11	ELECT 22MF 20% 50V	
C477	1-126-942-61	ELECT	1000MF 20% 25V	C1104	1-104-664-11	ELECT 47MF 20% 16V	
C501	1-163-259-91	CERAMIC CHIP	220PF 5% 50V	C1105	1-104-664-11	ELECT 47MF 20% 16V	
C502	1-126-959-11	ELECT	0.47MF 20% 50V	C1106	1-126-964-11	ELECT 10MF 20% 50V	
C503	1-163-003-11	CERAMIC CHIP	330PF 10% 50V	C1107	1-163-003-11	CERAMIC CHIP 330PF 10% 50V	
C504	1-102-212-00	CERAMIC CHIP	820PF 10% 500V	C1108	1-126-960-11	ELECT 1MF 20% 50V	
C505	1-102-002-00	CERAMIC CHIP	680PF 10% 500V	C1109	1-126-964-11	ELECT 10MF 20% 50V	
C506	1-106-383-00	MYLAR	0.047MF 10% 200V	C1110	1-163-227-11	CERAMIC CHIP 10PF 5% 50V	
C507 $\Delta$	1-162-116-00	CERAMIC CHIP	680PF 10% 2KV	C1111	1-163-227-11	CERAMIC CHIP 10PF 5% 50V	
C508	1-102-244-00	CERAMIC CHIP	220PF 10% 500V	C1112	1-163-227-11	CERAMIC CHIP 10PF 5% 50V	
C509	1-162-116-00	CERAMIC CHIP	680PF 10% 2KV	C1351	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C510	1-137-150-11	MYLAR	0.01MF 10% 100V	C1352	1-126-933-11	ELECT 100MF 20% 16V	
C511 $\Delta$	1-115-460-11	FILM	0.022MF 3% 1.2KV	C1353	1-163-037-11	CERAMIC CHIP 0.022MF 10% 50V	
C513		VARIANT (SEE VARIANT PARTS LIST ON P. 64)		C1354	1-216-295-91	SHORT	
C514		VARIANT (SEE VARIANT PARTS LIST ON P. 64)		C1501		VARIANT (SEE VARIANT PARTS LIST ON P. 64)	
C515	1-106-343-00	MYLAR	0.001MF 10% 100V				
C516	1-115-461-11	FILM	2MF 5% 200V				
C517	1-107-649-11	ELECT	2.2MF 20% 250V				
C518	1-106-395-00	MYLAR	0.15MF 10% 200V				
C519	1-162-815-11	CERAMIC CHIP	47PF 5% 500V				
C520		VARIANT (SEE VARIANT PARTS LIST ON P. 64)					
C521		VARIANT (SEE VARIANT PARTS LIST ON P. 64)					
C522	1-126-960-11	ELECT	1MF 20% 50V				
C525	1-102-244-00	CERAMIC CHIP	220PF 10% 500V				
C526	1-107-662-11	ELECT	22MF 20% 250V				
C527	1-162-116-00	CERAMIC CHIP	680PF 10% 2KV				
C528	1-164-161-11	CERAMIC CHIP	0.0022MF 10% 50V				
C529	1-128-551-11	ELECT	22MF 20% 25V				
C530	1-137-366-11	FILM	0.0022MF 5% 50V				
C531	1-126-965-11	ELECT	22MF 20% 50V				
C532	1-126-965-11	ELECT	22MF 20% 50V				
C537		VARIANT (SEE VARIANT PARTS LIST ON P. 64)					
C539		VARIANT (SEE VARIANT PARTS LIST ON P. 64)					
C540	1-123-024-21	ELECT	33MF 160V				
C541	1-128-560-11	ELECT	22MF 20% 100V				
C542		VARIANT (SEE VARIANT PARTS LIST ON P. 64)					
C545	1-106-387-00	MYLAR	0.068MF 10% 200V				
C546	1-106-343-00	MYLAR	0.001MF 10% 100V				
C547	1-106-343-00	MYLAR	0.001MF 10% 100V				
C551	1-163-037-11	CERAMIC CHIP	0.022MF 10% 50V				
C561	1-126-967-11	ELECT	47MF 20% 50V				

**CONNECTOR**

CN106 *	1-508-784-00	PIN, CONNECTOR (5MM PITCH)	1P
CN270	1-573-298-11	CONNECTOR, BOARD TO BOARD	20P
CN271	1-573-978-21	CONNECTOR, BOARD TO BOARD	11P
CN351 *	1-564-509-11	PLUG, CONNECTOR	6P
CN461 *	1-564-507-11	PLUG, CONNECTOR	4P
CN501 *	1-580-798-11	CONNECTOR PIN (DY)	6P
CN503 *	1-564-508-11	PLUG, CONNECTOR	5P
CN1001 *	1-564-512-11	PLUG, CONNECTOR	9P
CN1101	1-573-298-11	CONNECTOR, BOARD TO BOARD	20P
CN1641 *	1-564-515-11	PLUG, CONNECTOR	12P
CN1941		VARIANT (SEE VARIANT PARTS LIST ON P. 64)	
CN3001	1-573-298-11	CONNECTOR, BOARD TO BOARD	20P

**DIODE**

D001	8-719-991-33	DIODE 1SS133T-77	
D002	8-719-109-89	DIODE RD5.6ESB2	
D003	8-719-991-33	DIODE 1SS133T-77	
D004	8-719-110-17	DIODE RD10ESB2	
D011	8-719-983-20	DIODE MTZJ-T-77-4.3C	
D013	8-719-991-33	DIODE 1SS133T-77	
D014	8-719-991-33	DIODE 1SS133T-77	
D015	8-719-991-33	DIODE 1SS133T-77	
D353	8-719-991-33	DIODE 1SS133T-77	
D356	8-719-991-33	DIODE 1SS133T-77	



The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

Les composants identifiés par un trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

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## Note:

The components identified with shading and a critical symbol (Δ) are critical for safety. Replace only with part number specified.

## Note:

Les composants identifiés par un trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## COMMON PARTS LIST



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q512	Δ 8-729-809-29	TRANSISTOR 2SC4159-E		R047	1-249-417-11	CARBON 1K 5%	1/4W
Q551	8-729-216-22	TRANSISTOR 2SA1162-G		R048	1-249-417-11	CARBON 1K 5%	1/4W
Q552	8-729-422-27	TRANSISTOR 2SD601A-Q		R049	1-249-417-11	CARBON 1K 5%	1/4W
Q561	8-729-422-27	TRANSISTOR 2SD601A-Q		R052	1-216-061-00	RES, CHIP 3.3K 5%	1/10W
Q562	8-729-422-27	TRANSISTOR 2SD601A-Q		R053	1-216-061-00	RES, CHIP 3.3K 5%	1/10W
Q563	8-729-105-08	TRANSISTOR 2SA1330-06		R054	1-216-061-00	RES, CHIP 3.3K 5%	1/10W
Q1102	8-729-119-78	TRANSISTOR 2SC2785-HFE		R055	1-216-097-91	RES, CHIP 100K 5%	1/10W
Q1103	8-729-422-27	TRANSISTOR 2SD601A-Q		R056	1-216-033-00	RES, CHIP 220 5%	1/10W
<b>RESISTOR</b>				R057	1-249-417-11	CARBON 1K 5%	1/4W
R001	1-216-045-00	RES, CHIP 680 5%	1/10W	R058	1-216-033-00	RES, CHIP 220 5%	1/10W
R002	1-247-815-91	CARBON 220 5%	1/4W	R064	1-216-033-00	RES, CHIP 220 5%	1/10W
R003	1-216-097-91	RES, CHIP 100K 5%	1/10W	R065	1-216-033-00	RES, CHIP 220 5%	1/10W
R004	1-216-121-91	RES, CHIP 1M 5%	1/10W	R066	1-216-033-00	RES, CHIP 220 5%	1/10W
R006	1-247-815-91	CARBON 220 5%	1/4W	R067	1-216-041-00	RES, CHIP 470 5%	1/10W
R007	1-216-073-00	RES, CHIP 10K 5%	1/10W	R068	1-247-815-91	CARBON 220 5%	1/4W
R008	1-247-815-91	CARBON 220 5%	1/4W	R069	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R009	1-216-073-00	RES, CHIP 10K 5%	1/10W	R070	1-249-421-11	CARBON 2.2K 5%	1/4W
R010	1-216-037-00	RES, CHIP 330 5%	1/10W	R071	1-247-815-91	CARBON 220 5%	1/4W
R011	1-216-065-91	RES, CHIP 4.7K 5%	1/10W	R072	1-216-033-00	RES, CHIP 220 5%	1/10W
R012	1-216-033-00	RES, CHIP 220 5%	1/10W	R073	1-216-033-00	RES, CHIP 220 5%	1/10W
R013	1-216-065-91	RES, CHIP 4.7K 5%	1/10W	R074	1-216-033-00	RES, CHIP 220 5%	1/10W
R014	1-216-065-91	RES, CHIP 4.7K 5%	1/10W	R075	1-216-033-00	RES, CHIP 220 5%	1/10W
R015	1-216-073-00	RES, CHIP 10K 5%	1/10W	R076	1-216-033-00	RES, CHIP 220 5%	1/10W
R016	1-216-073-00	RES, CHIP 10K 5%	1/10W	R077	1-216-033-00	RES, CHIP 220 5%	1/10W
R019	1-249-425-11	CARBON 4.7K 5%	1/4W	R078	1-249-417-11	CARBON 1K 5%	1/4W
R020	1-216-065-91	RES, CHIP 4.7K 5%	1/10W	R079	1-216-033-00	RES, CHIP 220 5%	1/10W
R021	1-216-033-00	RES, CHIP 220 5%	1/10W	R080	1-216-065-91	RES, CHIP 4.7K 5%	1/10W
R022	1-249-429-11	CARBON 10K 5%	1/4W	R081	1-216-025-91	RES, CHIP 100 5%	1/10W
R023	1-216-089-91	RES, CHIP 47K 5%	1/10W	R082	1-216-025-91	RES, CHIP 100 5%	1/10W
R024	1-249-381-11	CARBON 1 5%	1/4W F	R083	1-249-429-11	CARBON 10K 5%	1/4W
R025	1-163-010-11	CERAMIC CHIP 0.0012MF 10%	50V	R084	1-216-049-91	RES, CHIP 1K 5%	1/10W
R026	1-163-038-91	CERAMIC CHIP 0.1MF	25V	R085	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R027	1-249-389-11	CARBON 4.7 5%	1/4W F	R087	1-247-815-91	CARBON 220 5%	1/4W
R028	1-249-417-11	CARBON 1K 5%	1/4W	R090	1-216-033-00	RES, CHIP 220 5%	1/10W
R029	1-216-025-91	RES, CHIP 100 5%	1/10W	R092	1-249-429-11	CARBON 10K 5%	1/4W
R030	1-249-425-11	CARBON 4.7K 5%	1/4W	R093	1-249-387-11	CARBON 3.3 5%	1/4W F
R031	1-247-815-91	CARBON 220 5%	1/4W	R094	1-249-381-11	CARBON 1 5%	1/4W F
R032	1-247-815-91	CARBON 220 5%	1/4W	R096	1-216-347-11	METAL OXIDE 0.68 5%	1W F
R036	1-216-049-91	RES, CHIP 1K 5%	1/10W	R097	1-216-065-91	RES, CHIP 4.7K 5%	1/10W
R037	1-216-049-91	RES, CHIP 1K 5%	1/10W	R099	1-216-065-91	RES, CHIP 4.7K 5%	1/10W
R038	1-216-049-91	RES, CHIP 1K 5%	1/10W	R101	1-249-381-11	CARBON 1 5%	1/4W F
R039	1-247-807-31	CARBON 100 5%	1/4W	R131	1-216-035-00	RES, CHIP 270 5%	1/10W
R040	1-247-815-91	CARBON 220 5%	1/4W	R132	1-216-115-00	RES, CHIP 560K 5%	1/10W
R041	1-216-065-91	RES, CHIP 4.7K 5%	1/10W	R133	1-216-039-00	RES, CHIP 390 5%	1/10W
R042	1-216-065-91	RES, CHIP 4.7K 5%	1/10W	R135	1-216-073-00	RES, CHIP 10K 5%	1/10W
R044	1-216-033-00	RES, CHIP 220 5%	1/10W	R136	1-216-073-00	RES, CHIP 10K 5%	1/10W
R045	1-247-815-91	CARBON 220 5%	1/4W	R137	1-216-049-91	RES, CHIP 1K 5%	1/10W
R046	1-247-815-91	CARBON 220 5%	1/4W	R353	1-208-788-11	RES, CHIP 1.8K 0.50%	1/10W
				R354	1-216-077-00	RES, CHIP 15K 5%	1/10W



# COMMON PARTS LIST

## Note:

The components identified with shading and a critical symbol (▲) are critical for safety. Replace only with part number specified.

## Note:

The components identified by ▲ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R355	1-216-033-00	RES, CHIP	220 5% 1/10W	R471	1-216-069-00	RES, CHIP	6.8K 5% 1/10W
R356	1-216-033-00	RES, CHIP	220 5% 1/10W	R472	1-216-055-00	RES, CHIP	1.8K 5% 1/10W
R358	1-247-815-91	CARBON	220 5% 1/4W	R473	1-249-398-11	CARBON	27 5% 1/4W
R359	1-247-815-91	CARBON	220 5% 1/4W	R474	1-216-077-00	RES, CHIP	15K 5% 1/10W
R360	1-247-815-91	CARBON	220 5% 1/4W	R475	1-249-430-11	CARBON	12K 5% 1/4W
R361	1-216-025-91	RES, CHIP	100 5% 1/10W	R476	1-249-430-11	CARBON	12K 5% 1/4W
R362	1-216-025-91	RES, CHIP	100 5% 1/10W	R477	1-249-398-11	CARBON	27 5% 1/4W
R363	1-216-025-91	RES, CHIP	100 5% 1/10W	R478	1-249-418-11	CARBON	1.2K 5% 1/4W F
R364	1-216-101-00	RES, CHIP	150K 5% 1/10W	R479	1-249-418-11	CARBON	1.2K 5% 1/4W F
R365	VARIANT (SEE VARIANT PARTS LIST ON P. 64)			R480	1-249-385-11	CARBON	2.2 5% 1/4W F
R366	1-216-089-91	RES, CHIP	47K 5% 1/10W	R481	1-249-385-11	CARBON	2.2 5% 1/4W F
R367	1-216-097-91	RES, CHIP	100K 5% 1/10W	R482	1-249-421-11	CARBON	2.2K 5% 1/4W
R368	1-249-441-11	CARBON	100K 5% 1/4W	R483	1-249-421-11	CARBON	2.2K 5% 1/4W
R369	1-216-097-91	RES, CHIP	100K 5% 1/10W	R501	1-216-037-00	RES, CHIP	330 5% 1/10W
R370	1-249-417-11	CARBON	1K 5% 1/4W	R502	1-216-061-00	RES, CHIP	3.3K 5% 1/10W
R371	1-216-053-00	RES, CHIP	1.5K 5% 1/10W	R503	1-249-426-11	CARBON	5.6K 5% 1/4W F
R372	1-216-113-00	RES, CHIP	470K 5% 1/10W	R504 ▲	1-215-915-11	METAL OXIDE	470 5% 3W F
R373	1-216-073-00	RES, CHIP	10K 5% 1/10W	R505	1-249-431-11	CARBON	15K 5% 1/4W
R374	VARIANT (SEE VARIANT PARTS LIST ON P. 64)			R506	1-215-861-00	METAL OXIDE	47 5% 1W F
R375	1-216-025-91	RES, CHIP	100 5% 1/10W	R507	1-249-401-11	CARBON	47 5% 1/4W
R376	1-216-073-00	RES, CHIP	10K 5% 1/10W	R508	1-249-427-11	CARBON	6.8K 5% 1/4W
R379	1-216-033-00	RES, CHIP	220 5% 1/10W	R509	1-247-750-11	CARBON	680 5% 1/2W F
R380	1-247-815-91	CARBON	220 5% 1/4W	R510 ▲	1-215-860-11	METAL OXIDE	33 5% 1W F
R381	1-247-815-91	CARBON	220 5% 1/4W	R511	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R382	1-216-033-00	RES, CHIP	220 5% 1/10W	R512 ▲	1-215-886-11	METAL OXIDE	100 5% 2W F
R383	1-216-049-91	RES, CHIP	1K 5% 1/10W	R515	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R384	1-216-109-00	RES, CHIP	330K 5% 1/10W	R516	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R385	1-249-422-11	CARBON	2.7K 5% 1/4W	R517	1-249-415-11	CARBON	680 5% 1/4W
R386	1-216-049-91	RES, CHIP	1K 5% 1/10W	R518	1-216-073-00	RES, CHIP	10K 5% 1/10W
R387	1-216-049-91	RES, CHIP	1K 5% 1/10W	R519	1-249-411-11	CARBON	330 5% 1/4W
R388	1-216-089-91	RES, CHIP	47K 5% 1/10W	R521 ▲	1-215-915-11	METAL OXIDE	470 5% 3W F
R389	1-216-067-00	RES, CHIP	5.6K 5% 1/10W	R523	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R390	1-216-035-00	RES, CHIP	270 5% 1/10W	R524	1-249-429-11	CARBON	10K 5% 1/4W
R391	1-208-810-11	RES, CHIP	15K 0.50% 1/10W	R525	1-216-071-00	RES, CHIP	8.2K 5% 1/10W
R392	1-216-025-91	RES, CHIP	100 5% 1/10W	R528	1-216-081-00	RES, CHIP	22K 5% 1/10W
R393	1-216-043-91	RES, CHIP	560 5% 1/10W	R529	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R394	1-216-059-00	RES, CHIP	2.7K 5% 1/10W	▲ R530 ▲	1-208-808-11	RES, CHIP	12K 0.50% 1/10W
R395	1-216-061-00	RES, CHIP	3.3K 5% 1/10W	R531	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R396	1-249-417-11	CARBON	1K 5% 1/4W	R532	1-208-760-11	RES, CHIP	120 0.50% 1/10W
R397	1-249-425-11	CARBON	4.7K 5% 1/4W	R533	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R461	1-216-065-91	RES, CHIP	4.7K 5% 1/10W	R535	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R462	1-216-089-91	RES, CHIP	47K 5% 1/10W	R536 ▲	1-249-2377-11	CARBON	0.47 5% 1/4W F
R463	1-249-435-11	CARBON	33K 5% 1/4W	R537 ▲	1-249-377-11	CARBON	0.47 5% 1/4W F
R464	1-216-097-91	RES, CHIP	100K 5% 1/10W	R538	1-247-887-00	CARBON	220K 5% 1/4W
R465	1-249-413-11	CARBON	470 5% 1/4W	R541	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R466	1-249-388-11	CARBON	3.9 5% 1/4W F	R542	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R467	1-216-069-00	RES, CHIP	6.8K 5% 1/10W	R543	1-249-377-11	CARBON	0.47 5% 1/4W F
R469	1-216-055-00	RES, CHIP	1.8K 5% 1/10W	R546	VARIANT (SEE VARIANT PARTS LIST ON P. 64)		
R470	1-216-077-00	RES, CHIP	15K 5% 1/10W	R547	1-215-457-00	METAL	33K 1% 1/4W

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## COMMON PARTS LIST



REF.NO.	PART NO.	DESCRIPTION	REMARK
R549	1-215-437-00	METAL	4.7K 1% 1/4W
R550 $\Delta$	1-249-377-11	CARBON	0.47 5% 1/4W F
R551 $\Delta$	1-215-873-00	METAL OXIDE	4.7K 5% 1W F
R552	1-216-069-00	RES, CHIP	6.8K 5% 1/10W
R553 $\Delta$	1-249-377-11	CARBON	0.47 5% 1/4W F
R554	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R561	1-216-073-00	RES, CHIP	10K 5% 1/10W
R563 $\Delta$	1-216-351-00	METAL OXIDE	1.5 5% 1W F
R564	1-249-393-11	CARBON	10 5% 1/4W
R565 $\Delta$	1-215-890-11	METAL OXIDE	470 5% 2W F
R566	1-216-073-00	RES, CHIP	10K 5% 1/10W
R567 $\Delta$	1-249-385-11	CARBON	2.2 5% 1/4W F
R568	1-216-073-00	RES, CHIP	10K 5% 1/10W
R569	1-216-073-00	RES, CHIP	10K 5% 1/10W
R570	1-216-097-91	RES, CHIP	100K 5% 1/10W
R571	1-216-081-00	RES, CHIP	22K 5% 1/10W
R572	1-216-081-00	RES, CHIP	22K 5% 1/10W
R573	1-216-097-91	RES, CHIP	100K 5% 1/10W
R574 $\Delta$	1-216-365-00	METAL OXIDE	0.47 5% 2W F
R575	1-216-113-00	RES, CHIP	470K 5% 1/10W
R576	1-216-073-00	RES, CHIP	10K 5% 1/10W
R577	1-216-097-91	RES, CHIP	100K 5% 1/10W
R578	1-208-784-11	RES, CHIP	1.2K 0.50% 1/10W
R579	1-208-842-11	RES, CHIP	330K 0.50% 1/10W
R580	1-249-441-11	CARBON	100K 5% 1/4W
R1101	1-216-049-91	RES, CHIP	1K 5% 1/10W
R1102	1-215-900-11	METAL OXIDE	22K 5% 2W F
R1103	1-216-051-00	RES, CHIP	1.2K 5% 1/10W
R1104	1-216-083-00	RES, CHIP	27K 5% 1/10W
R1105	1-216-689-11	RES, CHIP	39K 5% 1/10W
R1106	1-216-049-91	RES, CHIP	1K 5% 1/10W
R1107	1-216-065-91	RES, CHIP	4.7K 5% 1/10W
R1108	1-216-073-00	RES, CHIP	10K 5% 1/10W
R1109	1-216-019-00	RES, CHIP	56 5% 1/10W
R1110	1-216-019-00	RES, CHIP	56 5% 1/10W
R1111	1-216-019-00	RES, CHIP	56 5% 1/10W
R1115	1-216-045-00	RES, CHIP	680 5% 1/10W
R1117	1-249-425-11	CARBON	4.7K 5% 1/4W
R1118	1-249-425-11	CARBON	4.7K 5% 1/4W
R1120	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R1121	1-216-035-00	RES, CHIP	270 5% 1/10W
R1122	1-216-115-00	RES, CHIP	560K 5% 1/10W
R1123	1-216-039-00	RES, CHIP	390 5% 1/10W
R1125	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R1126	1-216-035-00	RES, CHIP	270 5% 1/10W
R1127	1-216-115-00	RES, CHIP	560K 5% 1/10W
R1128	1-216-039-00	RES, CHIP	390 5% 1/10W
R1130	1-216-057-00	RES, CHIP	2.2K 5% 1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1351	1-247-815-91	CARBON	220 5% 1/4W
R1352	1-247-815-91	CARBON	220 5% 1/4W
R1353	1-247-815-91	CARBON	220 5% 1/4W
R1354	1-216-033-00	RES, CHIP	220 5% 1/10W
R1355	1-216-025-91	RES, CHIP	100 5% 1/10W
R1356	1-216-025-91	RES, CHIP	100 5% 1/10W
R1357	1-216-025-91	RES, CHIP	100 5% 1/10W
R1358	1-247-807-31	CARBON	100 5% 1/4W
R1359	1-216-025-91	RES, CHIP	100 5% 1/10W
R1360	1-216-069-00	RES, CHIP	6.8K 5% 1/10W
R1361	1-216-065-91	RES, CHIP	4.7K 5% 1/10W
R1362	1-216-295-91	SHORT	

SWITCH

S501 1-572-707-11 SWITCH, LEVER

TRANSFORMER

T501 1-437-210-11 TRANSFORMER, HORIZONTAL DRIVE  
T502 VARIANT (SEE VARIANT PARTS LIST ON P. 64)  
T503 VARIANT (SEE VARIANT PARTS LIST ON P. 64)  
T504 VARIANT (SEE VARIANT PARTS LIST ON P. 64)

TUNER

TU102  $\Delta$  8-598-431-00 TUNER, FSS BTF-WA411

CRYSTAL

X001 1-578-774-11 VIBRATOR, CRYSTAL  
X353 1-567-505-11 OSCILLATOR, CRYSTAL  
X354 1-577-611-11 OSCILLATOR, CERAMIC CHIP





## VARIANT PARTS LIST

### Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

### Note:

The components identified by  $\Delta$  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF.NO. PART NO. DESCRIPTION REMARK

The parts in this column belong to the following model(s) only:  
KV-32S65

### CAPACITOR

C370	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C513 $\Delta$	1-130-895-00	FILM	5.6MF	5%	400V
C514 $\Delta$	1-104-844-11	FILM	0.62MF	5%	200V
C520	1-164-645-11	CERAMIC CHIP	1000PF	10%	500V
C521	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C537	1-126-941-11	ELECT	470MF	20%	25V
C539 $\Delta$	1-126-935-11	ELECT	470MF	20%	16V
C1501	1-115-462-11	FILM	0.12MF	5%	200V

### CONNECTOR

CN1941*	1-564-508-11	PLUG, CONNECTOR	5P
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### RESISTOR

R365	1-216-101-00	RES, CHIP	150K	5%	1/10W
R374	1-216-125-00	RES, CHIP	1.5M	5%	1/10W
R511 $\Delta$	1-215-885-00	METAL OXIDE	68	5%	2W
R515	1-216-083-00	RES, CHIP	27K	5%	1/10W
R523	1-216-073-00	RES, CHIP	10K	5%	1/10W
R529	1-208-814-11	RES, CHIP	22K	0.50%	1/10W
$\Delta$ R531 $\Delta$	1-208-826-11	RES, CHIP	68K	0.50%	1/10W
R533 $\Delta$	1-215-902-11	METAL OXIDE	47K	5%	1W
R535	1-216-101-00	RES, CHIP	150K	5%	1/10W
R546	1-215-453-00	METAL OXIDE	22K	1%	1/4W

### TRANSFORMER

T502 $\Delta$	1-424-545-11	TRANSFORMER FERRITE (PMT)
T503 $\Delta$	1-453-207-11	FLYBACK TRANSFORMER ASSY, NX-2609//X4C

REF.NO. PART NO. DESCRIPTION REMARK

The parts in this column belong to the following model(s) only:  
KV-35S65

### CAPACITOR

C069	1-126-964-11	ELECT	10MF	20%	50V
C370	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C513 $\Delta$	1-129-720-00	FILM	0.033MF	5%	630V
C514 $\Delta$	1-136-540-11	FILM	0.82MF	5%	200V
C520	1-101-821-00	CERAMIC CHIP	0.0022MF		500V
C521	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C537	1-126-942-61	ELECT	1000MF	20%	25V
C539 $\Delta$	1-126-942-61	ELECT	1000MF	20%	25V
C542	1-106-383-00	MYLAR	0.047MF	10%	200V

### CONNECTOR

CN1941	1-564-511-11	PLUG, CONNECTOR	8P
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### COIL

L541	1-406-677-11	INDUCTOR
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### RESISTOR

R069	1-216-073-00	RES, CHIP	10K	5%	1/10W
R085	1-216-073-00	RES, CHIP	10K	5%	1/10W
R365	1-216-097-91	RES, CHIP	100K	5%	1/10W
R374	1-216-121-91	RES, CHIP	1M	5%	1/10W
R511 $\Delta$	1-215-886-11	METAL OXIDE	100	5%	2W
R515	1-216-077-00	RES, CHIP	15K	5%	1/10W
R523	1-216-071-00	RES, CHIP	8.2K	5%	1/10W
R529	1-208-812-11	RES, CHIP	18K	0.50%	1/10W
$\Delta$ R531 $\Delta$	1-208-838-11	RES, CHIP	220K	0.50%	1/10W
R533 $\Delta$	1-215-878-00	METAL OXIDE	33K	5%	1W
R535	1-216-103-00	RES, CHIP	180K	5%	1/10W
R541 $\Delta$	1-249-377-11	CARBON	0.47	5%	1/4W
R542 $\Delta$	1-249-397-11	CARBON	22	5%	1/4W
R546	1-215-451-00	METAL OXIDE	18K	1%	1/4W

### TRANSFORMER

T502 $\Delta$	1-429-408-11	TRANSFORMER FERRITE (PMT)
T503 $\Delta$	X-4034-797-1	FLYBACK TRANSFORMER ASSY, NX-3005//J1C
T504	1-413-059-00	TRANSFORMER FERRITE (DFT)

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## COMPLETE PARTS LIST

AV

B

REF.NO.	PART NO.	DESCRIPTION	REMARK			
<div>AV</div>						
* A-1298-612-A AV BOARD, COMPLETE						
CAPACITOR						
C101	1-126-960-11	ELECT	1MF	20%	50V	
C102	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C104	1-126-964-11	ELECT	10MF	20%	50V	
C106	1-104-664-11	ELECT	47MF	20%	25V	
C108	1-126-933-11	ELECT	100MF	20%	16V	
C109	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	
C110	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V	
C111	1-126-960-11	ELECT	1MF	20%	50V	
C113	1-126-934-11	ELECT	220MF	20%	16V	
C1904	1-102-129-00	CERAMIC CHIP	0.01MF	10%	50V	
C1905	1-126-964-11	ELECT	10MF	20%	50V	
C1906	1-102-129-00	CERAMIC CHIP	0.01MF	10%	50V	
C1907	1-126-964-11	ELECT	10MF	20%	50V	
C1908	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C1909	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
CONNECTOR						
CN101	1-573-301-21	CONNECTOR, BOARD TO BOARD				20P
CN102	1-573-979-21	CONNECTOR, BOARD TO BOARD				11P
CN103	* 1-564-507-11	PLUG, CONNECTOR				4P
CN106	* 1-564-506-11	PLUG, CONNECTOR				3P
DIODE						
D101	8-719-109-89	DIODE RD5.6ESB2				
D103	8-719-991-33	DIODE 1SS133T-77				
D104	8-719-991-33	DIODE 1SS133T-77				
D105	8-719-991-33	DIODE 1SS133T-77				
D106	8-719-991-33	DIODE 1SS133T-77				
IC						
IC1901	8-752-058-68	IC CXA1315M				
IC1902	8-759-470-63	IC NJM2145M-TE2				
CHIP CONDUCTOR						
JR102	1-216-295-91	SHORT				
JR103	1-216-295-91	SHORT				
JR105	1-216-295-91	SHORT				
COIL						
L102	1-410-470-11	INDUCTOR	10UH			
L105	1-408-421-00	INDUCTOR	100UH			

REF.NO.	PART NO.	DESCRIPTION	REMARK			
<u>TRANSISTOR</u>						
Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q103	8-729-216-22	TRANSISTOR 2SA1162-G				
Q104	8-729-216-22	TRANSISTOR 2SA1162-G				
Q105	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1901	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1902	8-729-216-22	TRANSISTOR 2SA1162-G				
<u>RESISTOR</u>						
R101	1-216-065-91	RES, CHIP	4.7K	5%	1/10W	
R102	1-216-083-00	RES, CHIP	27K	5%	1/10W	
R103	1-216-689-11	RES, CHIP	39K	5%	1/10W	
R104	1-216-045-00	RES, CHIP	680	5%	1/10W	
R106	1-216-081-00	RES, CHIP	22K	5%	1/10W	
R107	1-216-081-00	RES, CHIP	22K	5%	1/10W	
R108	1-216-081-00	RES, CHIP	22K	5%	1/10W	
R109	1-216-081-00	RES, CHIP	22K	5%	1/10W	
R112	1-216-057-00	RES, CHIP	2.2K	5%	1/10W	
R113	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R114	1-216-121-91	RES, CHIP	1M	5%	1/10W	
R115	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R116	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R117	1-216-065-91	RES, CHIP	4.7K	5%	1/10W	
R118	1-216-295-91	SHORT				
R121	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R1904	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R1905	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R2904	1-216-033-00	RES, CHIP	220	5%	1/10W	
R2905	1-216-033-00	RES, CHIP	220	5%	1/10W	
R2909	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R2910	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R2912	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R2913	1-216-073-00	RES, CHIP	10K	5%	1/10W	
R2914	1-216-073-00	RES, CHIP	10K	5%	1/10W	
<u>TUNER</u>						
TU101	8-598-430-00	TUNER, FSS BTF-FA401				

B

\* A-1135-949-A B BOARD, COMPLETE

CAPACITOR

C3501	1-104-664-11	ELECT	47MF	20%	25V
C3502	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C3503	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C3504	1-126-964-11	ELECT	10MF	20%	50V
C3505	1-163-131-00	CERAMIC CHIP	390PF	5%	50V



# COMPLETE PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C3506	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	<b>CONNECTOR</b>			
C3507	1-126-963-11	ELECT	4.7MF 20% 50V	CN3502	1-573-978-21	CONNECTOR, BOARD TO BOARD	11P
C3508	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	CN3561*	1-691-616-21	CONNECTOR, BOARD TO BOARD	15P
C3509	1-126-961-11	ELECT	2.2MF 20% 50V	<b>FILTER</b>			
C3510	1-163-229-11	CERAMIC CHIP	12PF 5% 50V	FL3501	1-239-847-11	FILTER, LOW PASS	
C3511	1-126-964-11	ELECT	10MF 20% 50V	FL3502	1-239-847-11	FILTER, LOW PASS	
C3512	1-163-133-00	CERAMIC CHIP	470PF 5% 50V	FL3503	1-239-847-11	FILTER, LOW PASS	
C3513	1-163-131-00	CERAMIC CHIP	390PF 5% 50V	<b>IC</b>			
C3514	1-163-009-11	CERAMIC CHIP	0.001MF 10% 50V	IC3501	8-759-065-82	IC MM1093ND	
C3515	1-126-963-11	ELECT	4.7MF 20% 50V	IC3502	8-752-385-80	IC CXD2073S	
C3516	1-163-089-00	CERAMIC CHIP	6PF 0.5PF 50V	IC3503	8-759-231-53	IC TA7805S	
C3517	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	<b>COIL</b>			
C3518	1-126-941-11	ELECT	470MF 20% 25V	L3501	1-410-470-11	INDUCTOR 10UH	
C3519	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	L3502	1-410-466-41	INDUCTOR 4.7UH	
C3520	1-163-133-00	CERAMIC CHIP	470PF 5% 50V	L3503	1-410-470-11	INDUCTOR 10UH	
C3521	1-104-664-11	ELECT	47MF 20% 25V	L3504	1-410-470-11	INDUCTOR 10UH	
C3522	1-126-964-11	ELECT	10MF 20% 50V	L3505	1-410-470-11	INDUCTOR 10UH	
C3523	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	<b>TRANSISTOR</b>			
C3524	1-104-664-11	ELECT	47MF 20% 25V	Q3501	8-729-422-27	TRANSISTOR 2SD601A-Q	
C3525	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	Q3502	8-729-216-22	TRANSISTOR 2SA1162-G	
C3526	1-163-038-91	CERAMIC CHIP	0.1MF 25V	Q3503	8-729-422-27	TRANSISTOR 2SD601A-Q	
C3527	1-163-038-91	CERAMIC CHIP	0.1MF 25V	Q3504	8-729-216-22	TRANSISTOR 2SA1162-G	
C3528	1-164-222-11	CERAMIC CHIP	0.22MF 25V	Q3505	8-729-422-27	TRANSISTOR 2SD601A-Q	
C3529	1-163-038-91	CERAMIC CHIP	0.1MF 25V	Q3506	8-729-216-22	TRANSISTOR 2SA1162-G	
C3530	1-163-037-11	CERAMIC CHIP	0.022MF 10% 50V	Q3507	8-729-216-22	TRANSISTOR 2SA1162-G	
C3532	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	Q3509	8-729-216-22	TRANSISTOR 2SA1162-G	
C3533	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	Q3510	8-729-422-27	TRANSISTOR 2SD601A-Q	
C3534	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	Q3516	8-729-216-22	TRANSISTOR 2SA1162-G	
C3535	1-104-664-11	ELECT	47MF 20% 25V	Q3555	8-729-216-22	TRANSISTOR 2SA1162-G	
C3536	1-126-964-11	ELECT	10MF 20% 50V	<b>RESISTOR</b>			
C3537	1-163-231-11	CERAMIC CHIP	15PF 5% 50V	R3501	1-216-091-00	RES, CHIP 56K 5% 1/10W	
C3538	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	R3502	1-216-081-00	RES, CHIP 22K 5% 1/10W	
C3539	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	R3503	1-216-009-00	RES, CHIP 22 5% 1/10W	
C3540	1-163-231-11	CERAMIC CHIP	15PF 5% 50V	R3504	1-216-029-00	RES, CHIP 150 5% 1/10W	
C3541	1-104-664-11	ELECT	47MF 20% 25V	R3505	1-216-037-00	RES, CHIP 330 5% 1/10W	
C3542	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V	R3506	1-216-035-00	RES, CHIP 270 5% 1/10W	
C3543	1-104-664-11	ELECT	47MF 20% 25V	R3507	1-216-057-00	RES, CHIP 2.2K 5% 1/10W	
C3544	1-104-664-11	ELECT	47MF 20% 25V	R3508	1-216-043-91	RES, CHIP 560 5% 1/10W	
C3545	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	R3509	1-216-075-00	RES, CHIP 12K 5% 1/10W	
C3548	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	R3510	1-216-049-91	RES, CHIP 1K 5% 1/10W	
C3549	1-126-964-11	ELECT	10MF 20% 50V	R3511	1-216-065-91	RES, CHIP 4.7K 5% 1/10W	
C3550	1-104-664-11	ELECT	47MF 20% 25V	R3512	1-216-065-91	RES, CHIP 4.7K 5% 1/10W	
C3551	1-163-021-91	CERAMIC CHIP	0.01MF 10% 50V				
C3553	1-126-941-11	ELECT	470MF 20% 25V				
C3556	1-128-551-11	ELECT	22MF 20% 25V				
C3557	1-163-235-11	CERAMIC CHIP	22PF 5% 50V				

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## COMPLETE PARTS LIST



REF.NO.	PART NO.	DESCRIPTION	REMARK
R3513	1-216-041-00	RES, CHIP	470 5% 1/10W
R3514	1-216-121-91	RES, CHIP	1M 5% 1/10W
R3515	1-216-077-00	RES, CHIP	15K 5% 1/10W
R3516	1-216-037-00	RES, CHIP	330 5% 1/10W
R3517	1-216-077-00	RES, CHIP	15K 5% 1/10W
R3518	1-216-067-00	RES, CHIP	5.6K 5% 1/10W
R3520	1-208-766-11	RES, CHIP	220 0.50% 1/10W
R3521	1-208-766-11	RES, CHIP	220 0.50% 1/10W
R3522	1-208-774-11	RES, CHIP	470 0.50% 1/10W
R3523	1-208-778-11	RES, CHIP	680 0.50% 1/10W
R3524	1-208-794-11	RES, CHIP	3.3K 0.50% 1/10W
R3526	1-208-776-91	RES, CHIP	560 0.50% 1/10W
R3527	1-208-824-91	RES, CHIP	560K 0.50% 1/10W
R3529	1-216-295-91	SHORT	
R3531	1-216-295-91	SHORT	
R3534	1-216-295-91	SHORT	
R3535	1-216-295-91	SHORT	
R3536	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R3537	1-216-043-91	RES, CHIP	560 5% 1/10W
R3538	1-216-071-00	RES, CHIP	8.2K 5% 1/10W
R3539	1-216-089-91	RES, CHIP	47K 5% 1/10W
R3540	1-216-049-91	RES, CHIP	1K 5% 1/10W
R3541	1-216-081-00	RES, CHIP	22K 5% 1/10W
R3542	1-216-041-00	RES, CHIP	470 5% 1/10W
R3543	1-216-035-00	RES, CHIP	270 5% 1/10W
R3544	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R3545	1-216-043-91	RES, CHIP	560 5% 1/10W
R3546	1-216-071-00	RES, CHIP	8.2K 5% 1/10W
R3547	1-216-089-91	RES, CHIP	47K 5% 1/10W
R3548	1-216-081-00	RES, CHIP	22K 5% 1/10W
R3549	1-216-049-91	RES, CHIP	1K 5% 1/10W
R3550	1-208-774-11	RES, CHIP	470 0.50% 1/10W
R3551	1-208-764-11	RES, CHIP	180 0.50% 1/10W
R3565	1-216-295-91	SHORT	
R3566	1-216-025-91	RES, CHIP	100 5% 1/10W
R3568	1-216-025-91	RES, CHIP	100 5% 1/10W
R3569	1-216-041-00	RES, CHIP	470 5% 1/10W
R3578	1-216-081-00	RES, CHIP	22K 5% 1/10W
R3579	1-216-081-00	RES, CHIP	22K 5% 1/10W
R3580	1-216-295-91	SHORT	
R3596	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R3597	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R3599	1-208-774-11	RES, CHIP	470 0.50% 1/10W

**CRYSTAL**

X3501	1-567-505-11	OSCILLATOR, CRYSTAL
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REF.NO.	PART NO.	DESCRIPTION	REMARK
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- \* A-1331-837-A C BOARD, COMPLETE (KV-32S65 only)
- \* A-1331-843-A C BOARD, COMPLETE (KV-35S65 only)

4-382-854-11 SCREW (M3X10), P, SW (+)

**CAPACITOR**

C1750	1-137-528-11	FILM	0.1MF	10%	250V
C1751	1-107-652-11	ELECT	10MF	20%	250V
C1790	1-102-129-00	CERAMIC CHIP	0.01MF	10%	50V
C1791	1-126-968-11	ELECT	100MF	20%	50V
C1792	1-102-108-00	CERAMIC CHIP	150PF	10%	50V
C1794	1-107-651-11	ELECT	4.7MF	20%	250V
		(KV-35S65 only)			
C1795	1-102-074-00	CERAMIC CHIP	0.001MF	10%	50V
C1799	1-162-114-00	CERAMIC CHIP	0.0047MF		2KV

**CONNECTOR**

CN1761	* 1-564-509-11	PLUG, CONNECTOR	6P
CN1764	* 1-564-508-11	PLUG, CONNECTOR	5P
CN1766	1-695-915-11	TAB (CONTACT)	

**DIODE**

D1790	8-719-991-33	DIODE 1SS133T-77
D1791	8-719-908-03	DIODE GP08D
D1792	8-719-908-03	DIODE GP08D
		(KV-35S65 only)
D1793	8-719-908-03	DIODE GP08D
D1794	8-719-908-03	DIODE GP08D
D1795	8-719-908-03	DIODE GP08D

**IC**

IC1701	8-759-535-08	IC TDA6108Q
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**JACK**

J1761	$\Delta$ 1-251-388-11	SOCKET, CRT
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**COIL**

L1790	1-410-671-31	INDUCTOR	47UH
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**TRANSISTOR**

Q1790	8-729-119-76	TRANSISTOR 2SA1175-HFE
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# COMPLETE PARTS LIST

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>RESISTOR</b>			
R1750	1-247-870-11	CARBON 43K 5% 1/4W	
R1763	1-260-099-11	CARBON 1K 5% 1/2W	
R1764	1-247-807-31	CARBON 100 5% 1/4W	
R1773	1-260-099-11	CARBON 1K 5% 1/2W	
R1774	1-247-807-31	CARBON 100 5% 1/4W	
R1783	1-260-099-11	CARBON 1K 5% 1/2W	
R1784	1-247-807-31	CARBON 100 5% 1/4W	
R1788	1-216-349-00	METAL OXIDE 1 5% 1W F	
R1789	1-249-437-11	CARBON 47K 5% 1/4W	
R1790	1-216-378-11	METAL OXIDE 5.6 5% 2W F (KV-32S65 only)	
R1790	1-216-369-00	METAL OXIDE 1 5% 2W F (KV-35S65 only)	
R1792	1-247-815-91	CARBON 220 5% 1/4W	
R1793	1-247-866-11	CARBON 30K 5% 1/4W	
R1794	1-260-132-11	CARBON 560K 5% 1/2W (KV-35S65 only)	
R1795	1-260-087-11	CARBON 100 5% 1/2W	
R1796	1-216-378-11	METAL OXIDE 5.6 5% 2W F (KV-32S65 only)	
R1796	1-216-369-00	METAL OXIDE 1 5% 2W F (KV-35S65 only)	
R1797	1-260-123-11	CARBON 100K 5% 1/2W	



- \* A-1316-389-A G BOARD, COMPLETE (KV-32S65 only)
- \* A-1316-399-A G BOARD, COMPLETE (KV-35S65 only)

1-533-223-11 HOLDER, FUSE  
4-382-854-11 SCREW (M3X10), P, SW (+)

## CAPACITOR

C601	1-136-346-21	FILM 0.22MF 20% 125V (KV-35S65 only)	
C602	1-126-964-11	ELECT 10MF 20% 50V	
C603 $\Delta$	1-113-903-11	CERAMIC CHIP 0.001MF 20% 250V	
C604 $\Delta$	1-136-346-21	FILM 0.22MF 20% 125V	
C605 $\Delta$	1-136-346-21	FILM 0.22MF 20% 125V	
C606 $\Delta$	1-117-894-11	ELECT 560MF 20% 250V	
C607 $\Delta$	1-117-894-11	ELECT 560MF 20% 250V	
C608	1-165-127-11	CERAMIC CHIP 470PF 10% 500V	
C609	1-136-175-00	FILM 0.68MF 5% 50V	
C610	1-136-175-00	FILM 0.68MF 5% 50V	
C611	1-136-169-00	FILM 0.22MF 5% 50V	
C612	1-136-169-00	FILM 0.22MF 5% 50V	
C613	1-164-646-11	CERAMIC CHIP 2200PF 10% 500V	
C615	1-129-722-00	FILM 0.047MF 5% 630V	
C616 $\Delta$	1-113-903-11	CERAMIC CHIP 0.001MF 20% 250V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C624	1-126-961-11	ELECT 2.2MF 20% 50V	
C628 $\Delta$	1-113-924-11	CERAMIC CHIP 0.0047MF 20% 250V	
C629 $\Delta$	1-107-680-91	ELECT 22MF 20% 450V	
C630	1-130-471-00	MYLAR 0.001MF 5% 50V	
C631	1-137-605-11	FILM 0.01MF 10% 250V	
C633	1-130-471-00	MYLAR 0.001MF 5% 50V	
C634	1-130-467-00	MYLAR 470PF 5% 50V	
C635	1-130-471-00	MYLAR 0.001MF 5% 50V	
C636	1-126-965-11	ELECT 22MF 20% 50V	
C637	1-126-940-11	ELECT 330MF 20% 25V	
C640 $\Delta$	1-113-924-11	CERAMIC CHIP 0.0047MF 20% 250V	
C641	1-128-550-11	ELECT 2200MF 20% 50V	
C643	1-107-641-11	ELECT 220MF 20% 160V	
C647	1-104-665-11	ELECT 100MF 20% 25V	
C650	1-104-664-11	ELECT 47MF 20% 25V	
C651	1-137-366-11	FILM 0.0022MF 5% 50V	
C652	1-106-351-00	MYLAR 0.0022MF 20% 200V	
C653	1-107-636-11	ELECT 10MF 20% 160V	
C654	1-164-625-11	CERAMIC CHIP 680PF 10% 500V	
C655	1-164-625-11	CERAMIC CHIP 680PF 10% 500V	
C656	1-164-625-11	CERAMIC CHIP 680PF 10% 500V	
C657	1-164-625-11	CERAMIC CHIP 680PF 10% 500V	
C660	1-126-767-11	ELECT 1000MF 20% 16V	
C690	1-164-645-11	CERAMIC CHIP 1000PF 10% 500V	
C691	1-164-645-11	CERAMIC CHIP 1000PF 10% 500V	

## CONNECTOR

CN601 *	1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P (KV-35S65 only)	
CN602 *	1-580-844-11	PIN, CONNECTOR (POWER)	
CN604 *	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P (KV-32S65 only)	
CN603 *	1-573-963-11	PIN CONNECTOR (PC BOARD) 3P (KV-35S65 only)	
CN641 *	1-564-515-11	PLUG, CONNECTOR 12P	
CN643 *	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	

## DIODE

D600 $\Delta$	8-719-991-33	DIODE 1SS133T-77	
D601	8-719-991-33	DIODE 1SS133T-77	
D602 $\Delta$	8-719-510-53	DIODE D4SB60L	
D603	8-719-052-90	DIODE D1NL40-TA2	
D604	8-719-052-90	DIODE D1NL40-TA2	
D612	8-719-991-33	DIODE 1SS133T-77	
D613	8-719-991-33	DIODE 1SS133T-77	
D614	8-719-991-33	DIODE 1SS133T-77	
D621 $\Delta$	8-719-911-55	DIODE U05G	
D622 $\Delta$	8-719-911-55	DIODE U05G	
D623	8-719-055-18	DIODE ERA22-08TP3	
D624	8-719-991-33	DIODE 1SS133T-77	
D625	8-719-991-33	DIODE 1SS133T-77	
D626	8-719-109-93	DIODE RD6.2ESB2	

**Note:**

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**Note:**

Les composants identifiés par un triangle et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

**COMPLETE PARTS LIST**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D627	8-719-510-48	DIODE D1N20R		R612	1-215-903-11	METAL OXIDE 68K 5% 2W	F
D628	8-719-063-70	DIODE D1NL20U		R613	1-215-903-11	METAL OXIDE 68K 5% 2W	F
D641	8-719-052-92	DIODE D10SBS4F		R614	1-215-903-11	METAL OXIDE 68K 5% 2W	F
D642 $\Delta$	8-719-510-12	DIODE D10SC4M		R615	1-215-903-11	METAL OXIDE 68K 5% 2W	F
D643	8-719-028-45	DIODE D2L20U		R618	1-249-425-11	CARBON 4.7K 5% 1/4W	
D644	8-719-028-45	DIODE D2L20U		R619	1-249-425-11	CARBON 4.7K 5% 1/4W	
D645	8-719-028-45	DIODE D2L20U		R620	1-249-425-11	CARBON 4.7K 5% 1/4W	
D646	8-719-028-45	DIODE D2L20U		R621	1-249-429-11	CARBON 10K 5% 1/4W	
D647	8-719-063-70	DIODE D1NL20U		R622	1-247-863-91	CARBON 22K 5% 1/4W	
D648	8-719-057-52	DIODE EZ0150AV1		R623 $\Delta$	1-205-943-11	CEMENTED 1 5% 20W	
D649	8-719-510-02	DIODE D1NS4		R624	1-260-131-11	CARBON 470K 5% 1/2W	
D650	8-719-510-02	DIODE D1NS4		R625	1-260-131-11	CARBON 470K 5% 1/2W	
<b>FUSE</b>				R626	1-249-425-11	CARBON 4.7K 5% 1/4W	
F601 $\Delta$	1-576-193-11	FUSE 6.3A/125V		R627 $\Delta$	1-220-797-11	CEMENTED 0.47 5% 10W	
<b>FERRITE BEAD</b>				R628	1-240-205-91	CARBON 22M 5% 1/2W	
FB601	1-410-396-41	FERRITE 0.45UH		R629 $\Delta$	1-220-797-11	CEMENTED 0.47 5% 10W	
FB602	1-410-396-41	FERRITE 0.45UH		R632	1-249-421-11	CARBON 2.2K 5% 1/4W	
FB603	1-410-396-41	FERRITE 0.45UH		R633	1-249-429-11	CARBON 10K 5% 1/4W	
FB604	1-410-396-41	FERRITE 0.45UH		R634	1-249-437-11	CARBON 47K 5% 1/4W	
FB641	1-410-397-21	FERRITE 1.1UH		R635	1-247-791-91	CARBON 22 5% 1/4W	
FB642	1-410-397-21	FERRITE 1.1UH		R636	1-249-415-11	CARBON 680 5% 1/4W	
FB645	1-410-397-21	FERRITE 1.1UH		R637	1-260-302-51	CARBON 6.8 5% 1/2W	
FB647	1-410-397-21	FERRITE 1.1UH		R638	1-249-413-11	CARBON 470 5% 1/4W	
<b>IC</b>				R639 $\Delta$	1-249-389-11	CARBON 4.7 5% 1/4W	F
IC601 $\Delta$	8-729-041-12	TRANSISTOR MX0841AB-F		R640	1-215-485-00	METAL 470K 1% 1/4W	
IC622	8-759-450-47	IC BA05T		R641	1-247-843-11	CARBON 3.3K 5% 1/4W	
IC641	8-759-198-03	IC PQ09RF21		R642	1-247-843-11	CARBON 3.3K 5% 1/4W	
IC643	8-749-012-13	IC DM-58		R643	1-249-387-11	CARBON 3.3 5% 1/4W	F
<b>COIL</b>				R648	1-247-887-00	CARBON 220K 5% 1/4W	
L642	1-412-529-11	INDUCTOR 22UH		R649	1-249-425-11	CARBON 4.7K 5% 1/4W	F
<b>TRANSISTOR</b>				R659	1-249-429-11	CARBON 10K 5% 1/4W	
Q621 $\Delta$	8-729-044-30	TRANSISTOR 2SK2845-LB102		R660 $\Delta$	1-249-393-11	CARBON 10 5% 1/4W	F
Q622	8-729-119-78	TRANSISTOR 2SC2785-HFE		R661	1-249-419-11	CARBON 1.5K 5% 1/4W	F
Q644	8-729-119-78	TRANSISTOR 2SC2785-HFE		R666 $\Delta$	1-249-377-11	CARBON 0.47 5% 1/4W	F
Q645	8-729-119-76	TRANSISTOR 2SA1175-HFE		R667 $\Delta$	1-249-377-11	CARBON 0.47 5% 1/4W	F
Q646	8-729-119-76	TRANSISTOR 2SA1175-HFE		R668 $\Delta$	1-249-377-11	CARBON 0.47 5% 1/4W	F
Q647	8-729-119-78	TRANSISTOR 2SC2785-HFE		R670 $\Delta$	1-249-377-11	CARBON 0.47 5% 1/4W	F
Q648	8-729-922-39	TRANSISTOR 2SD2144S-V		R671 $\Delta$	1-249-377-11	CARBON 0.47 5% 1/4W	F
<b>RESISTOR</b>				R672 $\Delta$	1-249-377-11	CARBON 0.47 5% 1/4W	F
R603 $\Delta$	1-219-776-11	CARBON 2.2M 10% 1/2W		<b>RELAY</b>			
R607 $\Delta$	1-202-933-61	FUSIBLE 0.1 10% 1/2W	F	RY600 $\Delta$	1-755-266-11	RELAY, AC POWER	
R608 $\Delta$	1-216-373-11	METAL OXIDE 2.2 5% 2W	F	RY601 $\Delta$	1-755-146-11	RELAY, AC POWER	
R611 $\Delta$	1-216-373-11	METAL OXIDE 2.2 5% 2W	F	<b>TRANSFORMER</b>			
				T601 $\Delta$	1-426-717-11	TRANSFORMER, LINE FILTER (LFT)	
				T602 $\Delta$	1-426-717-11	TRANSFORMER, LINE FILTER (LFT)	
				T603 $\Delta$	1-429-992-21	TRANSFORMER, CONVERTER (PRT)	
				T605 $\Delta$	1-429-415-11	TRANSFORMER, CONVERTER (PIT)	

# G HS HV COMPLETE PARTS LIST

## Note:

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## Note:

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REF.NO.	PART NO.	DESCRIPTION	REMARK
T621	$\Delta$ 1-431-852-11	TRANSFORMER, CONVERTER	(SRT)

### THERMISTOR

THP601	$\Delta$ 1-809-539-11	THERMISTOR, POSITIVE	
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### VARISTOR

VDR601	$\Delta$ 1-801-074-41	VARISTOR ERZV10D271	
VDR602	1-801-074-41	VARISTOR ERZV10D271	

## HS

- \* A-1372-519-A HS BOARD, COMPLETE (KV-32S65 only)
- \* A-1372-507-A HS BOARD, COMPLETE (KV-35S65 only)

### CAPACITOR

C2168	1-104-665-11	ELECT	100MF	20%	25V
		KV-32S65 only)			
C2169	1-126-959-11	ELECT	0.47MF	20%	50V
		KV-32S65 only)			

### CONNECTOR

CN2101	1-564-524-11	PLUG, CONNECTOR	9P		
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### DIODE

D2106	1-810-039-11	LED UNIT (KV-32S65 only)			
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### IC

IC2103	8-742-014-11	HYB IC SBX1981-51(KV-32S65 only)			
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### RESISTOR

R2109	1-216-033-00	RES, CHIP	220	5%	1/10W
		(KV-32S65 only)			
R2110	1-216-033-00	RES, CHIP	220	5%	1/10W
		(KV-32S65 only)			
R2159	1-216-047-91	RES, CHIP	820	5%	1/10W
		(KV-32S65 only)			
R2160	1-216-049-91	RES, CHIP	1K	5%	1/10W
		(KV-32S65 only)			
R2161	1-216-055-00	RES, CHIP	1.8K	5%	1/10W
		(KV-32S65 only)			
R2162	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
		(KV-32S65 only)			
R2163	1-216-073-00	RES, CHIP	10K	5%	1/10W
		(KV-32S65 only)			

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<u>SWITCH</u>	

S2101	1-692-431-21	SWITCH, TACTILE (KV-32S65 only)	
S2102	1-692-431-21	SWITCH, TACTILE (KV-32S65 only)	
S2103	1-692-431-21	SWITCH, TACTILE (KV-32S65 only)	
S2104	1-692-431-21	SWITCH, TACTILE (KV-32S65 only)	
S2105	1-692-431-21	SWITCH, TACTILE (KV-32S65 only)	

S2106	1-692-431-21	SWITCH, TACTILE (KV-32S65 only)	
S2107	1-692-431-21	SWITCH, TACTILE (KV-32S65 only)	

## HV

- \* A-1372-523-A HV BOARD, COMPLETE (KV-35S65 only)

### CAPACITOR

C2068	1-104-665-11	ELECT	100MF	20%	25V
C2070	1-165-319-11	CERAMIC CHIP	0.1MF		50V

### DIODE

D2006	1-810-039-11	LED UNIT			
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### IC

IC2003	8-742-014-11	HYB IC SBX1981-51			
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### RESISTOR

R2009	1-216-033-00	RES, CHIP	220	5%	1/10W
R2010	1-216-033-00	RES, CHIP	220	5%	1/10W
R2059	1-216-047-91	RES, CHIP	820	5%	1/10W
R2060	1-216-049-91	RES, CHIP	1K	5%	1/10W
R2061	1-216-055-00	RES, CHIP	1.8K	5%	1/10W
R2062	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R2063	1-216-073-00	RES, CHIP	10K	5%	1/10W

### SWITCH

S2001	1-692-431-21	SWITCH, TACTILE			
S2002	1-692-431-21	SWITCH, TACTILE			
S2003	1-692-431-21	SWITCH, TACTILE			
S2004	1-692-431-21	SWITCH, TACTILE			
S2005	1-692-431-21	SWITCH, TACTILE			
S2006	1-692-431-21	SWITCH, TACTILE			
S2007	1-692-431-21	SWITCH, TACTILE			

REF.NO.	PART NO.	DESCRIPTION	REMARK
<div style="border: 1px solid black; padding: 5px; display: inline-block; font-size: 2em; font-weight: bold;">P</div>			
* A-1195-138-A P BOARD, COMPLETE			
<u>CAPACITOR</u>			
C3319	1-163-031-11	CERAMIC CHIP	0.01MF 50V
C3320	1-126-960-11	ELECT	1MF 20% 50V
C3321	1-163-231-11	CERAMIC CHIP	15PF 5% 50V
C3322	1-163-231-11	CERAMIC CHIP	15PF 5% 50V
C3323	1-163-031-11	CERAMIC CHIP	0.01MF 50V
C3324	1-104-664-11	ELECT	47MF 20% 16V
C3328	1-104-664-11	ELECT	47MF 20% 16V
C3329	1-104-664-11	ELECT	47MF 20% 16V
C3330	1-163-031-11	CERAMIC CHIP	0.01MF 50V
C3331	1-104-664-11	ELECT	47MF 20% 16V
C3332	1-104-664-11	ELECT	47MF 20% 25V
C3334	1-163-031-11	CERAMIC CHIP	0.01MF 50V
C3335	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C3336	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C3337	1-164-005-11	CERAMIC CHIP	0.47MF 25V
C3340	1-163-031-11	CERAMIC CHIP	0.01MF 50V
C3346	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C3347	1-126-960-11	ELECT	1MF 20% 50V
C3348	1-104-664-11	ELECT	47MF 20% 16V
C3349	1-163-121-00	CERAMIC CHIP	150PF 5% 50V
C3350	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C3352	1-163-031-11	CERAMIC CHIP	0.01MF 50V
C3353	1-164-346-11	CERAMIC CHIP	1MF 16V
C3354	1-163-031-11	CERAMIC CHIP	0.01MF 50V
C3355	1-126-925-11	ELECT	470MF 20% 10V
C3356	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C3357	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C3358	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C3359	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C3360	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C3361	1-163-038-91	CERAMIC CHIP	0.1MF 25V
C3362	1-126-925-11	ELECT	470MF 20% 10V
C3363	1-163-031-11	CERAMIC CHIP	0.01MF 50V
C3364	1-163-231-11	CERAMIC CHIP	15PF 5% 50V
C3365	1-163-133-00	CERAMIC CHIP	470PF 5% 50V
C3366	1-164-005-11	CERAMIC CHIP	0.47MF 25V
C3367	1-126-963-11	ELECT	4.7MF 20% 50V
C3368	1-164-005-11	CERAMIC CHIP	0.47MF 25V
C3369	1-163-251-11	CERAMIC CHIP	100PF 5% 50V
C3370	1-164-346-11	CERAMIC CHIP	1MF 16V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C3371	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V
C3372	1-164-005-11	CERAMIC CHIP	0.47MF 25V
<u>CONNECTOR</u>			
CN3301*	1-764-816-11	CONNECTOR, BOARD TO BOARD	20P
<u>IC</u>			
IC3302	8-759-231-53	IC TA7805S	
IC3303	8-759-533-89	IC SDA9288XE-GEG-B121	
IC3304	8-752-086-80	IC CXA2019AQ-T4	
<u>COIL</u>			
L3301	1-408-607-31	INDUCTOR	22UH
L3302	1-410-473-11	INDUCTOR	18UH
L3303	1-408-612-31	INDUCTOR	56UH
<u>TRANSISTOR</u>			
Q3301	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q3302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q3306	8-729-216-22	TRANSISTOR 2SA1162-G	
Q3310	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q3312	8-729-216-22	TRANSISTOR 2SA1162-G	
Q3314	8-729-216-22	TRANSISTOR 2SA1162-G	
<u>RESISTOR</u>			
R3301	1-216-295-91	SHORT	
R3302	1-216-295-91	SHORT	
R3305	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R3312	1-216-037-00	RES, CHIP	330 5% 1/10W
R3313	1-216-295-91	SHORT	
R3314	1-216-049-91	RES, CHIP	1K 5% 1/10W
R3323	1-216-065-91	RES, CHIP	4.7K 5% 1/10W
R3329	1-216-069-00	RES, CHIP	6.8K 5% 1/10W
R3330	1-216-295-91	SHORT	
R3337	1-216-033-00	RES, CHIP	220 5% 1/10W
R3338	1-216-033-00	RES, CHIP	220 5% 1/10W
R3339	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R3340	1-216-041-00	RES, CHIP	470 5% 1/10W
R3341	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R3342	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R3343	1-216-049-91	RES, CHIP	1K 5% 1/10W
R3346	1-216-049-91	RES, CHIP	1K 5% 1/10W
R3351	1-216-295-91	SHORT	
R3352	1-216-049-91	RES, CHIP	1K 5% 1/10W
R3358	1-216-047-91	RES, CHIP	820 5% 1/10W
R3359	1-216-047-91	RES, CHIP	820 5% 1/10W
R3360	1-216-053-00	RES, CHIP	1.5K 5% 1/10W
R3361	1-216-053-00	RES, CHIP	1.5K 5% 1/10W





## COMPLETE PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK		
R3362	1-216-041-00	RES, CHIP	470	5%	1/10W	C231	1-163-031-11	CERAMIC CHIP	0.01MF		50V
R3363	1-216-041-00	RES, CHIP	470	5%	1/10W	C232	1-136-161-00	FILM	0.047MF	5%	50V
R3364	1-216-041-00	RES, CHIP	470	5%	1/10W	C233	1-136-161-00	FILM	0.047MF	5%	50V
R3375	1-216-041-00	RES, CHIP	470	5%	1/10W	C234	1-126-960-11	ELECT	1MF	20%	50V
R3376	1-216-071-00	RES, CHIP	8.2K	5%	1/10W	C235	1-126-960-11	ELECT	1MF	20%	50V
R3377	1-216-073-00	RES, CHIP	10K	5%	1/10W	C236	1-136-161-00	FILM	0.047MF	5%	50V
R3378	1-208-786-11	RES, CHIP	1.5K	0.50%	1/10W	C237	1-126-960-11	ELECT	1MF	20%	50V
R3379	1-216-077-00	RES, CHIP	15K	5%	1/10W	C238	1-126-960-11	ELECT	1MF	20%	50V
R3380	1-216-025-91	RES, CHIP	100	5%	1/10W	C261	1-136-161-00	FILM	0.047MF	5%	50V
R3381	1-216-025-91	RES, CHIP	100	5%	1/10W	C262	1-104-664-11	ELECT	47MF	20%	25V
R3382	1-216-057-00	RES, CHIP	2.2K	5%	1/10W	C263	1-136-161-00	FILM	0.047MF	5%	50V
R3383	1-216-025-91	RES, CHIP	100	5%	1/10W	C264	1-126-941-11	ELECT	470MF	20%	25V
R3384	1-216-033-00	RES, CHIP	220	5%	1/10W	C266	1-126-960-11	ELECT	1MF	20%	50V
R3385	1-216-109-00	RES, CHIP	330K	5%	1/10W	C267	1-126-960-11	ELECT	1MF	20%	50V
R3386	1-216-295-91	SHORT				C270	1-126-960-11	ELECT	1MF	20%	50V
R3387	1-216-295-91	SHORT				C271	1-126-960-11	ELECT	1MF	20%	50V
R3388	1-216-295-91	SHORT				C276	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
R3393	1-216-025-91	RES, CHIP	100	5%	1/10W	<u>CONNECTOR</u>					
R3394	1-216-025-91	RES, CHIP	100	5%	1/10W	CN261	* 1-691-632-21	CONNECTOR, BOARD TO BOARD			15P
R3395	1-216-061-00	RES, CHIP	3.3K	5%	1/10W	CN262	1-573-301-21	CONNECTOR, BOARD TO BOARD			20P
<u>CRYSTAL</u>						CN263	* 1-564-506-11	PLUG, CONNECTOR			3P
X3302	1-760-095-21	VIBRATOR, CRYSTAL				CN264	1-573-979-21	CONNECTOR, BOARD TO BOARD			11P
X3303	1-577-611-11	OSCILLATOR, CERAMIC CHIP				<u>DIODE</u>					
X3304	1-567-505-11	OSCILLATOR, CRYSTAL				D100	8-719-981-99	DIODE MTZJ-3.3			
<u>UV</u>						D231	8-719-110-17	DIODE RD10ESB2			
* A-1394-910-A UV BOARD, COMPLETE						D232	8-719-110-17	DIODE RD10ESB2			
<u>CAPACITOR</u>						D233	8-719-110-17	DIODE RD10ESB2			
C150	1-126-956-91	ELECT	0.1MF	20%	50V	D234	8-719-110-17	DIODE RD10ESB2			
C153	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	D235	8-719-110-17	DIODE RD10ESB2			
C154	1-126-963-11	ELECT	4.7MF	20%	50V	D236	8-719-110-17	DIODE RD10ESB2			
C155	1-126-963-11	ELECT	4.7MF	20%	50V	D240	8-719-110-17	DIODE RD10ESB2			
C156	1-126-963-11	ELECT	4.7MF	20%	50V	D241	8-719-110-17	DIODE RD10ESB2			
C158	1-126-963-11	ELECT	4.7MF	20%	50V	D242	8-719-110-17	DIODE RD10ESB2			
C160	1-126-964-11	ELECT	10MF	20%	50V	D243	8-719-110-17	DIODE RD10ESB2			
C161	1-126-956-91	ELECT	0.1MF	20%	50V	D244	8-719-110-17	DIODE RD10ESB2			
C162	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	D264	8-719-110-17	DIODE RD10ESB2			
C163	1-104-664-11	ELECT	47MF	20%	25V	D265	8-719-110-17	DIODE RD10ESB2			
C164	1-165-319-11	CERAMIC CHIP	0.1MF		50V	D902	8-719-110-17	DIODE RD10ESB2			
C165	1-126-964-11	ELECT	10MF	20%	50V	<u>IC</u>					
C168	1-126-963-11	ELECT	4.7MF	20%	50V	IC100	8-752-072-39	IC CXA2021S			
C171	1-126-941-11	ELECT	470MF	20%	25V	IC101	8-759-100-96	IC UPC4558G2			
C172	1-126-959-11	ELECT	0.47MF	20%	50V	IC261	8-759-534-81	IC MM1313AD			
C173	1-126-959-11	ELECT	0.47MF	20%	50V	<u>JACK</u>					
C176	1-126-964-11	ELECT	10MF	20%	50V	J231	1-750-515-11	TERMINAL BLOCK, S			3P
C177	1-126-964-11	ELECT	10MF	20%	50V	J232	1-750-517-11	JACK BLOCK, PIN			3P

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
J233	1-750-516-11	JACK BLOCK, PIN	2P	R212	1-249-440-11	CARBON 82K	5% 1/4W
J902	1-764-143-11	JACK	3P	R228	1-216-033-00	RES, CHIP 220	5% 1/10W
J903	1-764-143-11	JACK	3P	R229	1-216-025-91	RES, CHIP 100	5% 1/10W
J904	1-764-143-11	JACK	3P	R230	1-216-033-00	RES, CHIP 220	5% 1/10W
<b>CHIP CONDUCTOR</b>				R231	1-216-022-00	RES, CHIP 75	5% 1/10W
JR101	1-216-295-91	SHORT		R232	1-216-022-00	RES, CHIP 75	5% 1/10W
JR109	1-216-295-91	SHORT		R233	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
JR147	1-216-295-91	SHORT		R234	1-216-022-00	RES, CHIP 75	5% 1/10W
JR148	1-216-295-91	SHORT		R235	1-216-113-00	RES, CHIP 470K	5% 1/10W
JR201	1-216-295-91	SHORT		R236	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
JR204	1-216-295-91	SHORT		R237	1-216-113-00	RES, CHIP 470K	5% 1/10W
JR205	1-216-295-91	SHORT		R238	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
JR269	1-216-295-91	SHORT		R239	1-216-022-00	RES, CHIP 75	5% 1/10W
JR270	1-216-295-91	SHORT		R240	1-216-113-00	RES, CHIP 470K	5% 1/10W
JR272	1-216-295-91	SHORT		R241	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
JR273	1-216-295-91	SHORT		R242	1-216-113-00	RES, CHIP 470K	5% 1/10W
JR274	1-216-295-91	SHORT		R243	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
JR276	1-216-295-91	SHORT		R244	1-216-113-00	RES, CHIP 470K	5% 1/10W
JR901	1-216-295-91	SHORT		R245	1-249-417-11	CARBON 1K	5% 1/4W
<b>TRANSISTOR</b>				R246	1-216-113-00	RES, CHIP 470K	5% 1/10W
Q100	8-729-422-27	TRANSISTOR 2SD601A-Q		R247	1-249-417-11	CARBON 1K	5% 1/4W
Q101	8-729-422-27	TRANSISTOR 2SD601A-Q		R261	1-216-009-00	RES, CHIP 22	5% 1/10W
Q243	8-729-216-22	TRANSISTOR 2SA1162-G		R264	1-247-815-91	CARBON 220	5% 1/4W
Q261	8-729-422-27	TRANSISTOR 2SD601A-Q		R265	1-247-815-91	CARBON 220	5% 1/4W
Q262	8-729-422-27	TRANSISTOR 2SD601A-Q		R266	1-216-043-91	RES, CHIP 560	5% 1/10W
Q263	8-729-216-22	TRANSISTOR 2SA1162-G		R267	1-249-415-11	CARBON 680	5% 1/4W
Q265	8-729-216-22	TRANSISTOR 2SA1162-G		R268	1-216-025-91	RES, CHIP 100	5% 1/10W
<b>RESISTOR</b>				R269	1-216-025-91	RES, CHIP 100	5% 1/10W
R100	1-216-033-00	RES, CHIP 220	5% 1/10W	R270	1-216-041-00	RES, CHIP 470	5% 1/10W
R101	1-216-033-00	RES, CHIP 220	5% 1/10W	R271	1-249-415-11	CARBON 680	5% 1/4W
R102	1-216-073-00	RES, CHIP 10K	5% 1/10W	R272	1-249-417-11	CARBON 1K	5% 1/4W
R103	1-216-093-00	RES, CHIP 68K	5% 1/10W	R275	1-249-425-11	CARBON 4.7K	5% 1/4W
R104	1-216-089-91	RES, CHIP 47K	5% 1/10W	R276	1-249-425-11	CARBON 4.7K	5% 1/4W
R105	1-216-089-91	RES, CHIP 47K	5% 1/10W	R277	1-216-049-91	RES, CHIP 1K	5% 1/10W
R106	1-216-049-91	RES, CHIP 1K	5% 1/10W	R279	1-216-025-91	RES, CHIP 100	5% 1/10W
R107	1-216-049-91	RES, CHIP 1K	5% 1/10W	R280	1-216-033-00	RES, CHIP 220	5% 1/10W
R108	1-216-073-00	RES, CHIP 10K	5% 1/10W	R281	1-216-033-00	RES, CHIP 220	5% 1/10W
R109	1-216-089-91	RES, CHIP 47K	5% 1/10W	R282	1-216-025-91	RES, CHIP 100	5% 1/10W
R110	1-216-089-91	RES, CHIP 47K	5% 1/10W	R283	1-216-025-91	RES, CHIP 100	5% 1/10W
R111	1-216-025-91	RES, CHIP 100	5% 1/10W	R284	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R112	1-216-121-91	RES, CHIP 1M	5% 1/10W	R285	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R133	1-216-061-00	RES, CHIP 3.3K	5% 1/10W	R286	1-216-049-91	RES, CHIP 1K	5% 1/10W
R134	1-216-061-00	RES, CHIP 3.3K	5% 1/10W	R291	1-216-025-91	RES, CHIP 100	5% 1/10W
R135	1-216-097-91	RES, CHIP 100K	5% 1/10W	R293	1-216-025-91	RES, CHIP 100	5% 1/10W
R136	1-216-093-00	RES, CHIP 68K	5% 1/10W	R294	1-216-049-91	RES, CHIP 1K	5% 1/10W
R137	1-216-025-91	RES, CHIP 100	5% 1/10W	R902	1-249-405-11	CARBON 100	5% 1/4W F
				R919	1-216-295-91	SHORT	
				R920	1-249-405-11	CARBON 100	5% 1/4W F
				R921	1-249-405-11	CARBON 100	5% 1/4W F

[illegible]

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

**COMPLETE PARTS LIST****WA WB**

REF.NO.	PART NO.	DESCRIPTION	REMARK
R972	1-216-073-00	RES, CHIP	10K 5% 1/10W
R973	1-216-121-91	RES, CHIP	1M 5% 1/10W
R974	1-216-073-00	RES, CHIP	10K 5% 1/10W
R975 $\Delta$	1-216-446-00	METAL OXIDE	18 5% 2W F
R976 $\Delta$	1-216-423-11	METAL OXIDE	27 5% 1W F
R979	1-216-017-91	RES, CHIP	47 5% 1/10W
R981	1-216-081-00	RES, CHIP	22K 5% 1/10W
R982	1-216-081-00	RES, CHIP	22K 5% 1/10W
R983	1-216-081-00	RES, CHIP	22K 5% 1/10W
R984	1-216-081-00	RES, CHIP	22K 5% 1/10W
R987	1-216-049-91	RES, CHIP	1K 5% 1/10W
R988	1-216-295-91	SHORT	
R989	1-216-304-11	RES, CHIP	3.3 5% 1/10W
R992	1-216-073-00	RES, CHIP	10K 5% 1/10W
R1941	1-260-311-51	CARBON	39 5% 1/2W
R1942	1-249-384-11	CARBON	1.8 5% 1/4W F
R1943	1-249-414-11	CARBON	560 5% 1/4W F
R1944	1-249-432-11	CARBON	18K 5% 1/4W
R1945	1-216-476-11	METAL OXIDE	180 5% 3W F
R1946	1-249-417-11	CARBON	1K 5% 1/4W F
R1947	1-249-432-11	CARBON	18K 5% 1/4W
R1948	1-249-414-11	CARBON	560 5% 1/4W
R1949	1-249-384-11	CARBON	1.8 5% 1/4W F
R1950	1-249-400-11	CARBON	39 5% 1/4W F

**WB**

\* A-1372-508-A WB BOARD, MOUNTED (KV-32S65 only)

4-382-854-11 SCREW (M3X10), P, SW (+)

**CAPACITOR**

C2941	1-126-935-11	ELECT	470MF	20%	16V
C2944	1-163-021-91	CERAMIC CHIP	0.01MF	10%	50V
C2946	1-126-933-11	ELECT	100MF	20%	16V
C2949	1-161-830-00	CERAMIC CHIP	0.0047MF		500V
C2950	1-126-933-11	ELECT	100MF	20%	16V
C2951	1-107-638-11	ELECT	33MF	20%	160V
C2952	1-104-999-11	MYLAR	0.1MF	10%	200V
C2953	1-106-383-00	MYLAR	0.047MF	10%	200V
C2954	1-137-364-11	FILM	0.001MF	5%	50V
C2955	1-107-667-11	ELECT	2.2MF	20%	160V
C2956	1-137-364-11	FILM	0.001MF	5%	50V
C2957	1-106-383-00	MYLAR	0.047MF	10%	200V
C2958	1-126-933-11	ELECT	100MF	20%	16V
C2975	1-163-001-11	CERAMIC CHIP	220PF	10%	50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>CONNECTOR</b>			
CN2941*	1-564-508-11	PLUG, CONNECTOR	5P
<b>DIODE</b>			
D2941	8-719-991-33	DIODE 1SS133T-77	
D2946	8-719-110-88	DIODE RD39ESB2	
D2947	8-719-110-88	DIODE RD39ESB2	
<b>COIL</b>			
L2942	1-215-863-11	METAL OXIDE	100 5% 1W F
<b>TRANSISTOR</b>			
Q2943	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2944	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2945	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2946	8-729-017-05	TRANSISTOR 2SA1837	
Q2947	8-729-017-06	TRANSISTOR 2SC4793	
Q2965	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2966	8-729-216-22	TRANSISTOR 2SA1162-G	
<b>RESISTOR</b>			
R2943	1-216-025-91	RES, CHIP	100 5% 1/10W
R2948	1-216-049-91	RES, CHIP	1K 5% 1/10W
R2949	1-216-049-91	RES, CHIP	1K 5% 1/10W
R2950	1-216-049-91	RES, CHIP	1K 5% 1/10W
R2951	1-216-049-91	RES, CHIP	1K 5% 1/10W
R2952	1-216-037-00	RES, CHIP	330 5% 1/10W
R2953	1-216-021-00	RES, CHIP	68 5% 1/10W
R2954	1-216-033-00	RES, CHIP	220 5% 1/10W
R2955	1-216-047-91	RES, CHIP	820 5% 1/10W
R2956	1-216-295-91	SHORT	
R2957	1-216-073-00	RES, CHIP	10K 5% 1/10W
R2958	1-216-295-91	SHORT	
R2959	1-216-021-00	RES, CHIP	68 5% 1/10W
R2979	1-216-017-91	RES, CHIP	47 5% 1/10W
R4941	1-260-311-51	CARBON	39 5% 1/2W
R4942	1-249-384-11	CARBON	1.8 5% 1/4W F
R4943	1-249-414-11	CARBON	560 5% 1/4W F
R4944	1-249-432-11	CARBON	18K 5% 1/4W
R4945	1-216-476-11	METAL OXIDE	180 5% 3W F
R4946	1-249-417-11	CARBON	1K 5% 1/4W F
R4947	1-249-432-11	CARBON	18K 5% 1/4W
R4948	1-249-414-11	CARBON	560 5% 1/4W
R4949	1-249-384-11	CARBON	1.8 5% 1/4W F
R4950	1-249-400-11	CARBON	39 5% 1/4W F

## ACCESSORIES AND PACKING MATERIALS

<u>REF.NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	<u>REF.NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
<u>32S65</u>				<u>35S65</u>			
<u>ACCESSORIES AND PACKING MATERIALS</u>				<u>ACCESSORIES AND PACKING MATERIALS</u>			
4-041-259-01		BAG, PROTECTION		4-053-658-01		BAG, PROTECTION	
4-063-179-01		CARTON, INDIVIDUAL		4-056-782-01		CARTON, INDIVIDUAL	
4-063-180-01		CUSHION, UPPER ASSY		4-056-783-01		CUSHION, UPPER ASSY	
4-063-181-01		CUSHION, LOWER ASSY		4-056-784-01		CUSHION, LOWER ASSY	
3-862-568-21		MANUAL, INSTRUCTION		3-862-568-21		MANUAL, INSTRUCTION	
<u>REMOTE COMMANDER</u>				<u>REMOTE COMMANDER</u>			
1-475-802-11		REMOTE COMMANDER (RM-Y167)		1-475-802-11		REMOTE COMMANDER (RM-Y167)	
4-978-977-01		BATTERY COVER (FOR REMOTE)		4-978-977-01		BATTERY COVER (FOR REMOTE)	

**Sony Corporation**  
**Sony Technology Center**  
**Product Quality Division**  
**Service Promotion Department**

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